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ABSTRACT

The current international debate over patient rights to essential drugs versus intellectual property rights is inescapable. Across fields such as pharmaceuticals, electronics, and biotechnology, southern hemisphere countries appear to be finding it increasingly difficult to afford and benefit from technologies and ideas produced by big multinational companies. This 2002 issue of "Cooperation South" articulates broad suggestions on how to reform existing rules about the intellectual property system. The theme of this issue is: Creativity, Innovation and Intellectual Property Rights. There are 12 articles in the issue: (1) "'Road Map' for Intellectual Property Rights"; (2) "Balancing Health Needs and Drug Research Incentives" (Hannah E. Kettler; Chris Collins); (3) "Pricing Medicines to Benefit Poor Countries" (Jagdish Bhagwati); (4) "Capacity Building for Management of IPR" (Mart Leesti; Tom Pengelly); (5) "In the News: Current Issues in IPR"; (6) "From North-South to South-South: The True Face of Global Competition" (Robert J. S. Ross; Anita Chan); (7) "Costa Rica's Technology Strategy: Roots and Outcomes" (Andres Rodriguez-Clare); (8) "Paths for Arab Cooperation: Well Mapped, Little Traveled"; (9) "Lessons on Public Housing from Singapore for Sao Paulo" (W. E. Hewitt); (10) "Africa: From the OAU to the African Union" (Abdalla Bujra); (11) "Windows on the South: Current Trends, Perspectives, and Events"; and (12) "Sharing Ideas: A 21st Century Vision." (BT)

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Cooperation South 2002: Creativity, Innovation and Intellectual Property Rights.

Cosmas Gitta, Editor

United Nations Development Programmee, New York, NY

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COOPERATION SOUTH 2002

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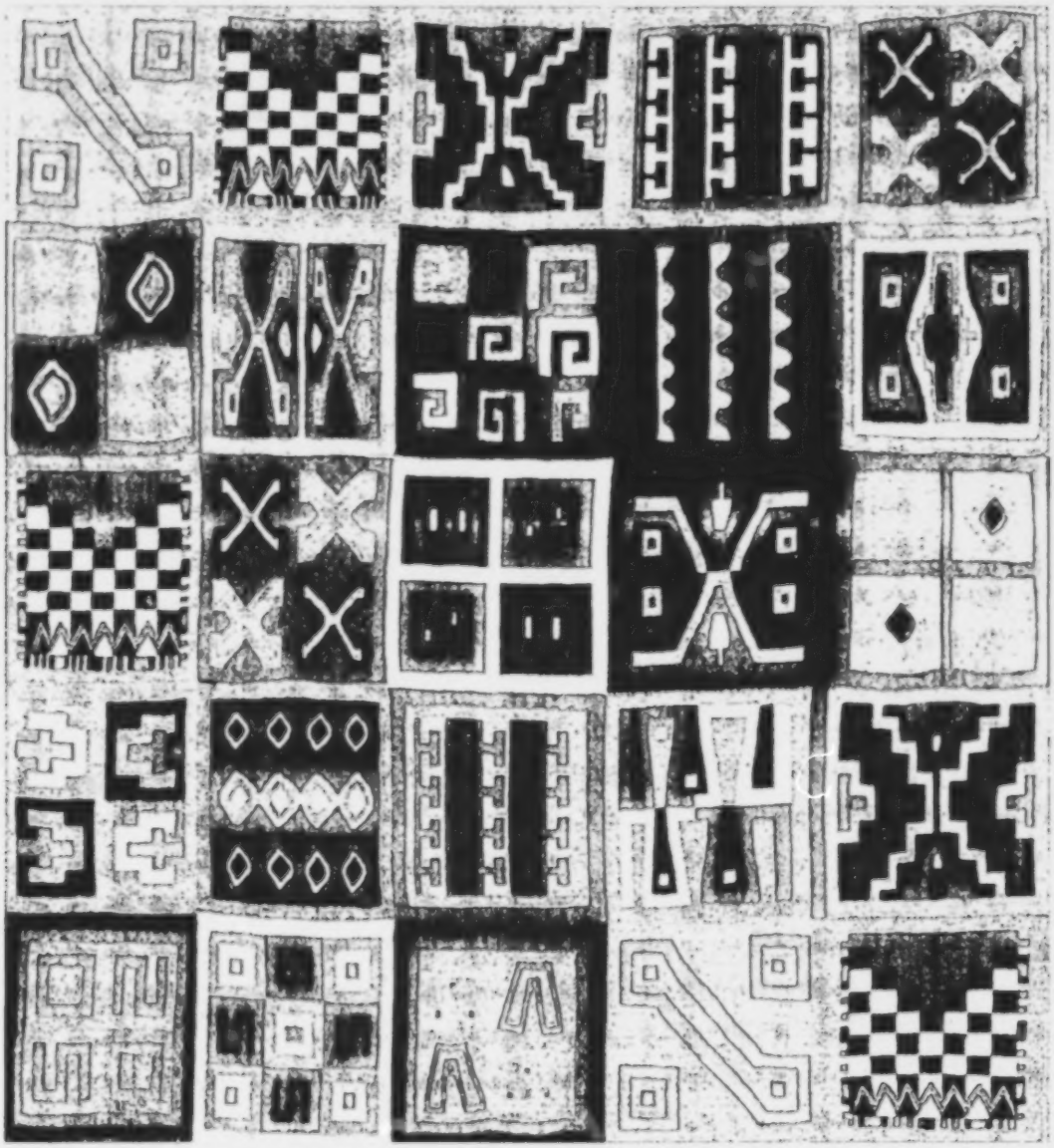


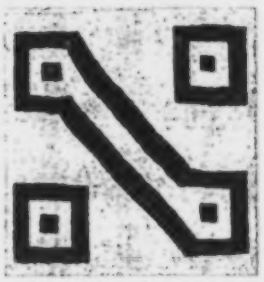
Creativity, Innovation and Intellectual Property Rights

3

The creativity of 4.7 billion people

The cover designs used on issues of this journal present artifacts or artworks that demonstrate the creativity and connectivity of people across the south.

Ancient tradition, modern product



Our cover reproduces a design from the 5,000-year-old textile tradition in southern Peru which was begun by ancestors of the Incas. Garments were designed with "tocapu" squares or rectangles containing various geometric forms and color combinations in clearly indicated sequences. Hundreds of tocapu designs have been identified, and some may represent emblems of geographic places or social rank. For example, the symbol for the Quechua word kapak, which means "noble sovereign," is in the square reproduced above from our cover.

Another distinctive element of these textiles is that they were woven from cotton fibers that are naturally red, ecru, mauve and various shades of brown. Spanish conquerors in Peru in the early 1500s marveled at extensive fields of cotton in a range of colors and at Indian weaving more technically sophisticated than was produced on European looms. Belying the widespread belief that all cotton is white, colored cotton plants have been closely guarded down through centuries by the Mochica Indians in the Andes mountains, and also by some small, traditional communities in Mexico and Guatemala. Plants which still survive today are organically grown and pesticide-free and are the basis for newly popular cotton products sold internationally. Growers include 15,000 peasants and Indians in Peru's "Native Cotton Project," and many others in the hills of Santander in Colombia, the highlands of Guatemala, and eastern Bolivia.

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The emblem of Technical Cooperation among Developing Countries (TCDC) displays a symbolic bridge joining the countries and people of the Southern hemisphere.

The centre of the emblem — where the Southern, Northern, Eastern and Western parts of the world join — symbolizes a further and ultimate objective of TCDC: the promotion of a truly global partnership for development.

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FROM THE ADMINISTRATOR

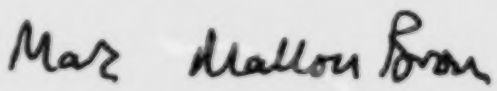
Adding Connectivity to Creativity

At the heart of the concept of "South-South" knowledge-sharing is the search to unlock, in the words of the pioneering world conference on Technical Cooperation among Developing Countries (TCDC) which UNDP organized almost 25 years ago — "the creativity" of the developing world. The South has an immense reservoir of traditional wisdom, problem-solving skills and new technologies that are worth sharing globally. The challenge is how to add connectivity to that creativity — to encourage such trade and cooperation, and reduce or eliminate the obstacles to such knowledge-sharing.

In this context, the current international debate over patients' rights to essential drugs versus intellectual property rights is inescapable. The very concept of intellectual property is a recognition of the need to provide protections — and rewards — for creativity. As such, it is a principle just as important to developing countries as developed ones. In practice, however, across fields such as pharmaceuticals, electronics and biotechnology, Southern countries appear to be finding it increasingly difficult to afford and benefit from technologies and ideas produced by big multinational companies. The World Bank estimates that, when broader intellectual property rules negotiated as part of the Uruguay Trade Round come fully into effect in the next few years, $40 billion more per year will be transferred from poor countries to Northern corporations — a sum approaching total aid flows in the other direction.

There are no easy answers. On the one hand, opponents argue that such restrictions — and imbalanced income flows — are clearly discriminatory to developing countries, locking them out of ideas and technologies that are critical to accelerating

growth and poverty reduction. On the other, defenders of the global standards say that a strong patent system in the long run fuels innovation and provides an excellent way for developing nations to attract investment and encourage rapid technology transfers while protecting their own products. A third view, which is gaining increasing weight, is that free trade, open financial markets and intellectual property protection are worthy goals which should not, however, be pursued as part of a one-size-fits-all approach or on a rigid timetable. All three approaches — and a number of broader suggestions on how to reform existing rules — are articulated in this issue of Cooperation South, which seeks to help stimulate debate on how to build an intellectual property system that maximizes benefits for developing countries while giving due recognition to the importance of protecting creativity, wherever it may be found.



Mark Malloch Brown, Administrator
United Nations Development Programme

"Road Map" for Intellectual Property Rights*

INTELLECTUAL PROPERTY (IP) broadly means the legal rights which result from intellectual activity in the industrial, scientific, literary and artistic fields. Countries have policies and laws regarding intellectual property for three main reasons:

- to protect the moral and economic rights of creators in their creations and the rights of the public to have access to those creations;
- to promote creativity and the dissemination and application of its results, to encourage fair trading, and thus to contribute to economic and social development;
- to facilitate transfer of technology in the form of foreign direct investment, joint ventures and licensing.

Creators and producers of intellectual goods and services are granted the right to control their use for a defined period. That exclusive right is generally subject to limits and exceptions aimed at balancing the legitimate interests of rights holders and users.

Intellectual property is traditionally divided into two branches:

Industrial property consists of inventions, industrial designs and trade secrets which can be protected by patents in order to stimulate innovation, design and the creation of technology; trademarks and other signs which distinguish the goods or services of one undertaking from others; and geographical indications which identify a good as originating in a place that gives it special characteristics. Trademark protection aims to stimulate and ensure fair competition, and to enable consumers to make informed choices between various goods and services. Patent protection is typically given for a period of 20 years, industrial design is protected for a minimum of 10 years, and trademark protection may last indefinitely.

Copyright covers literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and those

* Adapted from documents and websites of WIPO, WTO and CIPR. To read further on this and related topics, visit www.iprcommission.org, www.panos.org.uk.

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of broadcasters in their radio and television programs. The main purpose is to encourage and reward creative work. Copyright extends for a minimum period of 50 years after the death of the author.

THE TRIPS FRAMEWORK

Wide variations in the protection and enforcement of these rights around the world became a source of tension in international economic relations as the importance of intellectual property in trade increased. To introduce more order and predictability and to settle disputes more systematically, new international trade rules for intellectual property rights were sought during the trade negotiations, known as the Uruguay Round, between 1986 and 1994. The result was an international agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS) under the World Trade Organization (WTO). TRIPS tries to narrow the gaps in the way these rights are protected around the world, to bring them under common international rules, and to link with and build on obligations entered into under earlier agreements, especially the Paris and Berne Conventions on Trademarks and Copyright, respectively. When there are trade disputes over intellectual property rights, WTO's dispute settlement system is now available.

When the WTO agreements took effect on 1 January 1995, developed countries had one year to ensure that their laws and practices conformed with the TRIPS agreement. Within a transition period ending 1 January 2000, developing country WTO members completed much of the legislative reforms required for implementing the TRIPS agreement. However, there is less information on such reforms by least developed countries, which have leeway for implementing the TRIPS agreement during a transition period ending 1 January 2005.

For pharmaceuticals, the TRIPS agreement is structured so that product patent protection will be mandatory for developing countries as of 1 January 2005, except that the least developed countries have been granted an extension until 1 January 2016. This delay came about at the World Trade Organization conference in Doha, Qatar, in November 2001, which issued a declaration that public health needs must be weighed equally with intellectual property rights.

The road that led to the TRIPS agreement began with the Paris Convention for the Protection of Industrial Property, created in 1883. Since then, many additional international conventions and agreements have been drawn up, and in the past forty years, two global and five regional organizations have been created by cooperating governments (see box).

The creation of three of the organizations (EPO, EAPO and GCCPO) is linked to wider projects of economic integration within the regions concerned. While the same is also true of OAPI and ARIPO, the common legacies of the colonial past (existence

TABLE 1: KEY AGREEMENTS AND CONVENTIONS

Short name	Full name	Year	Signers
Berne	Berne Convention for the Protection of Literary and Artistic Works (copyright)	1886	144
CBD	Convention on Biological Diversity	1993	186
Hague	Hague Agreement Concerning the International Registration of Industrial Designs	1999	29
Madrid	Madrid Agreement (and Protocol) Concerning International Registration of Marks (trademarks)	1891	70
Paris	Paris Convention for the Protection of Industrial Property	1883	164
PCT	Patent Cooperation Treaty	1970	115
TRIPS	Agreement on Trade Related Aspects of Intellectual Property	1995	144
UPOV	International Convention for Protection of New Varieties of Plants	1961	51

of a common official language, legal standards, etc.) also seem to have played a predominant role in their creation.

There are no regional IPR organizations in south, southeast and east Asia, the Pacific, and the Americas. However, in southeast Asia, a framework agreement on IPR was signed some years ago at ministerial level, which established working groups to meet at regular intervals, and has led to the implementation of a common filing system for trademarks. Efforts in the Andean region led to the establishment of a common law on IPR for the six countries of the Andean Pact.

INTERREGIONAL ROLE OF THE EUROPEAN PATENT OFFICE (EPO)

When a foreign application arrives in a developing country, there is a 98 per cent chance that it is also being processed by EPO. Its 4,000 technical scientists and other experts probably constitute one of the largest pools of scientists and experts in the world, not only in the IPR field. Its patents know-how covers administrative and examination procedures, human resources development, documentation techniques, patent information strategies, and information technology solutions for patent offices.

The EPO is probably the world's most important provider of IPR technical cooperation:

- With multilateral financing from the European Union, EPO has assisted projects in China, ASEAN countries, India, Vietnam, most eastern European

TABLE 2: INSTITUTIONS WITH GLOBAL AND REGIONAL ROLES

Short name	Full name	Year	Members
Global			
WIPO	World Intellectual Property Organization (Geneva)	1893	179
WTO	World Trade Organization (Geneva)	1995	144
Regional			
ARIPO	African Regional Industrial Property Organization (Harare)	1976	15
EPO	European Patent Office (Munich)	1977	30
EAPO	Eurasian Patent Office	1993	9
GCCPO	Gulf Cooperation Council Patent Office (Riyadh)	1996	6
OAPI	Organisation Africaine de la Propriété Intellectuelle (Yaounde)	1962	16

countries, and some countries of the former Soviet Union. Total project costs are almost 30.5 million euros from 1990 to 2005.

- With its own resources, EPO has carried out bilateral projects in developing countries almost since its inception. Current projects are in Africa, Arab countries, China, ASEAN countries, India, eastern European countries, countries of the former Soviet Union, and Latin America. These projects cost an estimated 18.8 million euros for the period 1996-2001 (excluding expert salary costs). The EPO International Academy organizes training seminars for about 500 persons per year, holds international topical conferences, and develops tutorial material. EPO's information technology unit develops systems, tools, and on-line data bases for patent searches and administration.

REGIONAL ORGANIZATIONS

1. Organisation Africaine de la Propriété Intellectuelle (OAPI). OAPI (in English, the African Organization for Intellectual Property) has 16 member states, of which 14 are French-speaking. It serves as a registering office and can also carry out novelty examination for trademarks upon demand. In 1999, OAPI received 341 patent applications (over 90 per cent from abroad) and 1,751 trademark applications (97 per cent from abroad). Its fees generated the equivalent of about 3.46 million euros in revenue for OAPI, apparently making the organization financially self-sustainable. It was even able to provide technical assistance worth about 286,000 euros to its member states.

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OAPI's 76 staff include 25 scientists, lawyers and experts.

After investing in information technology with assistance by WIPO and the French patent office, OAPI is now linked to WIPOnet, and is developing its own IT system for administering patents, trademarks, etc. It now seeks to enable full retrieval and evaluation of technological information in the region's patent documentation, and plans to create a regional training centre with support by international donors.

Of the original countries in OAPI, only Madagascar is left. Two non-French-speaking countries have joined (Equatorial Guinea and Guinea-Bissau). French-speaking countries around the Great Lakes in East Africa have not yet chosen between ARIPO and OAPI.

2. African Regional Industrial Property Organization (ARIPO). ARIPO has 15 member states in English-speaking Africa. Ten additional states have observer status, including Egypt, Nigeria and South Africa. Its revenues in 2001 were equivalent to US$ 1,348,600. Of this, 96 per cent came from application, examination and renewal fees for patents and the rest from trademarks and industrial designs. The number of patent applications varies between 250-350 per year. In 2001, there were 26 staff, of which 8 are at scientific/expert level.

Examiners at ARIPO assess patent applications in substance for novelty, inventive steps and industrial applicability, and determine if patentability criteria and requirements in the Harare Protocol on patents are met. They may also study reviews done by other offices, such as EPO and the US and Japanese patent offices. EPO is helping put into place a system for administering patents and trademark procedures, creating a data base with patent documentation from the ARIPO states, and working toward establishing a regional training center.

3. Eurasian Patent Office (EAPO) has a membership of six countries formerly within the Soviet Union — Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan and Moldova. All six have intellectual property legislation which is compliant with the TRIPS agreement. According to a recent EPO assessment, two of these countries have a high capacity for substantive examination of patent applications and have achieved full office automation (Belarus and Georgia), and three have high capacity for local preparation of laws and policymaking (Belarus, Kyryzstan and Moldova); the capacity ranking is lower for the other countries. The volume of applications processed varied from a low of 94 patents per year in Kyrgyzstan to 1,198 in Belarus, and from 1,571 trademarks a year in Armenia to 4,960 in Kyrgyzstan.

4. Patent Office of the Gulf Cooperation Council. The idea of establishing an "Arab regional IP organization" has been mainly promoted by Egypt. In the meantime, a regional organization for the Arab States of the Gulf (except for Yemen) was created in 1996, with United Arab Emirates, Bahrain, Saudi Arabia, Oman, Qatar, and Kuwait

as members. This young organization seems to follow a pragmatic approach in examining foreign applications, recognizing de facto foreign results whenever possible. It has been recommended that GCCPO establish a service to provide background technological information and documentation searches for their national industries to help them decide whether to apply at international level.

FUTURE STRATEGIES

A recent EPO study recommended future strategies for national, regional and international development of intellectual property regimes, including the following:.

1. Develop realistic concepts for the capacities, functions and methods needed at national levels by small or medium-scale IP offices. (Many small countries try to set up fully fledged patent offices, with search and substantive examination, though they have difficulties with such simple tasks as registering titles.)

2. Promote cooperation within and between subregions, even by conditioning technical assistance on the subsequent regional sharing of nationally acquired know-how and facilities.

3. Use a south-to-south approach in training, study visits and conferences, and support the establishment of training centres in the region, particularly in the field of patent information retrieval and evaluation.

4. Make patent information readily available to other countries, other offices and the public.

The following two articles are based on studies commissioned by the UK Government's Commission on Intellectual Property Rights (CIPR), which was established in April 2001 to "examine how intellectual property rights can work better for poor people." See the CIPR website at www.iprcommission.org for more information about CIPR's mandate and activities.

BALANCING HEALTH NEEDS AND DRUG RESEARCH INCENTIVES

BY HANNAH E. KETTLER AND CHRIS COLLINS

Are there ways to improve access to essential drugs for people in developing countries while simultaneously retaining or creating the incentives for pharmaceutical companies to research and develop needed new drugs, especially for neglected infectious diseases? How will broader patent protection for drugs, as foreseen under the trade-related intellectual protection agreement (TRIPS) of the World Trade Organization (WTO), affect incentives to conduct research and development (R&D), drug access and pricing and domestic production of generic drugs in developing countries? Some possible new approaches to these issues are offered in this article, which is based on a report commissioned by the UK Commission on Intellectual Property Rights. It was written by Dr. Hannah E. Kettler, a Project Director at the Institute of Global Health, University of California, San Francisco, with assistance from Chris Collins, an independent consultant.

INTRODUCTION AND OVERVIEW

A key global health challenge is how to simultaneously encourage more innovation and R&D into new, more effective products and ensure that people needing these products can afford and have access to them. Intellectual property rights (IPR) sit at the center of this debate. IPR is a necessary but insufficient incentive to encourage companies in the developed or the developing world to commit R&D resources towards neglected diseases. To the extent that it affects the price of patented drugs, IPR has a negative effect on poor patients' ability to afford and therefore access new drugs and vaccines. Other barriers to access, as shown by experience with HIV drug access in India, Brazil, and South Africa, include inadequate health care systems infrastructure and staff, poor government commitment to fighting the disease, and

the lack of sufficient financing to ensure access to HIV treatments.

To develop solutions within the current IPR system, new global norms for technology licensing agreements and pricing must be adopted. Considerable political discussion has been given to the establishment of differential pricing where the flow back of the cheaper priced products to the industrial countries is controlled. Second, in technology and research agreements, companies are making commitments, in exchange for their retaining the ownership of the IP, to help ensure that any approved product resulting from global health initiatives (and advanced with these initiatives' funds) will reach the patients who need them. At the same time, for substantive progress to be made, governments in developed countries must make substantive financial commitments to fund the development and purchase of new products. Governments in developing countries must also participate in global initiatives and help invest in the development of better health care infrastructure.

The R&D Problem

For at least 12 diseases, 99 to 100 per cent of all cases globally are located in developing countries. The 100 per cent category includes malaria with over 24 million sufferers (1996), chagas disease, dengue, encephalitis, lymphatic filariasis, onchocerciasis, schistosomiasis, tetanus, trachoma, and trypanosomiasis. In the 99+ per cent category are leishmaniasis, measles, polio, syphilis, diphtheria, leprosy and diarrhoeal diseases. For tuberculosis and HIV, the figures are 91 and 65 per cent, respectively (Lanjouw and Cockburn, 2001).

This group of "neglected diseases" is a low priority for both private and public investors in pharmaceutical R&D. Despite a large number of patients and significant need for products, the actual demand is small because of the targeted populations' inability to pay for new medicines. So companies see small markets and expect low returns from sales. The R&D process is long, risky and expensive, regardless of the indication or disease. At the same time, the marginal cost of producing pharmaceuticals, once tested, is low, which permits generics firms to manufacture and sell products at prices a fraction of that offered by innovator. Patent protection for the innovator, therefore, is considered an essential mechanism for securing economic returns on the innovation. For neglected diseases, however, that protection, and the market secured for the innovator, is insufficient to warrant the R&D investment.

Recent events in Canada point indicate the importance of patents as an incentive for investments in pharmaceutical innovation. Here, R&D investments rose significantly following the abolition of compulsory licensing (see terminology box), the strengthening of IPR, and adoption of tax incentives. World Bank-commissioned surveys of transnational corporations reveal that

BOX 1: SOME TERMINOLOGY

BOLAR PROVISION, sometimes called regulatory exception, allows manufacturers of generic drugs to use a patented invention, while still under patent, to develop the generic products that they can market as soon as the patent expires. The World Trade Organization (WTO) ruled that the provision is in accordance with TRIPS.

COMPULSORY LICENSING. Under TRIPS and the law of many individual countries, governments can, in the case of a national emergency, issue a license for production or purchase of a drug without approval of the patent holder. Patent holders are generally guaranteed some remuneration. Compulsory licensing has emerged as a primary issue of debate.

DIFFERENTIAL OR TIERED PRICING means pricing products differently in different markets where the segments ideally correspond with consumers' ability to pay. Some argue that the use of such policies has the potential to significantly lower the prices in developing countries of essential drugs that are still on patent, thereby expanding drug access without undermining the patent system.

DONATION PROGRAMS. A number of large pharmaceutical companies have initiated or participated in drug donation programs for HIV and other neglected diseases. In the case of HIV, companies tend to negotiate with countries on a case by case, or region by region basis.

LOCAL WORKING PROVISIONS require that a product be manufactured domestically within a certain time following its introduction in a country. For example, if a company does not manufacture and/or distribute a product in Brazil, within three years of its registration there, a Brazilian company is permitted to take a compulsory license and manufacture the product themselves. An opposing voice states that because of significant economies of scale in pharmaceutical manufacturing, local working requirements may actually make products more expensive. Another is that such provisions actually seek to protect local manufacturing capacity, not to benefit patients, and are therefore a violation of TRIPS.

PARALLEL IMPORTING involves the import of products from a third party rather than the patent-owning manufacturer to a second country. Parallel trade can undermine price differentials; if parallel trade makes a significantly lower price available internationally, it is difficult maintain higher prices in industrialized countries that are necessary for companies to recoup investment and seek profits.

PRICE CONTROLS are another option available to countries seeking to extend drug access. One view is that price controls may be effective at reducing prices while leaving patent owners only negligibly worse off (Scherer and Watal, 2001). The opposing view is that price controls are contrary to the free market and threaten innovation by undermining the ability to make profits.

pharmaceutical companies rank patent policies high in their decision criteria for foreign direct investment.

It is still too early to judge the impact on developing countries' infant pharmaceutical industries of introducing IPR laws that comply with TRIPS of the WTO. Some predict, for example, that the introduction of product patent protection in India will put hundreds of small local generics companies out of business. At the same time, it will provide new opportunities for those companies able to invest in R&D capabilities and for larger generics companies which will be able to enter and compete for contracts in global markets as products go off patent. In the absence of significant injections of funds for basic research, training, and technology transfer, it seems unlikely that in and of itself IPR will create new innovative companies. Still, it will improve the prospects for cross-national joint ventures and for scientists trained in the US and Europe to return home and build their own companies.

There is less evidence that the introduction of TRIPS will encourage companies and scientists in endemic countries to invest in treatments for neglected diseases. One global study of "new research activity" in tropical diseases post-1980 found only slight developments in malaria patent and investment behavior, while all others were stagnant despite many new entrants to the R&D pharmaceutical industry (Cockburn and Lanjouw, 2000).

Explicit, targeted policies and initiatives are needed above and beyond IPR to channel some of the resources and capabilities of the pharmaceutical industry towards neglected diseases.

To this end, some of the available policy options are:

Product development public private partnerships (PPPs) have been set up to develop drugs or vaccines for specific diseases. In exchange for funds and other support, the companies agree to contracts that include some mechanism for securing the development and delivery of any successful final product at affordable prices to developing world markets. In some cases, such as leishmaniasis, the PPP may be responsible for the market. In others, such as malaria, there is a paying travelers' market to which the industry partner may have first rights.

Incentives to invest in neglected diseases. Attempts to legislate effective national policies in the US and the UK for that purpose have been less successful. The goal is to combine cost-saving policies (push), such as grants and tax credits, and revenue-enhancing policies (pull), such as the creation of a purchase fund. Another "pull" proposal is to offer companies a patent extension on a product of their choice in exchange for their successfully developing and marketing, at affordable prices, a product for a neglected disease. While attractive to research-oriented companies, such a policy is unlikely to find favor with policymakers in developed countries who are

actively working to find ways to reduce the size of the publicly funded domestic drug bill. Generics companies whose strategies depend on predictable dates when product patents expire in large, profitable markets will also protest. An interesting but unexplored question is how companies in the developing world such as India, China, or Brazil would respond to the creation of a global fund or nationally based tax incentives to address diseases of concern to their own populations.

The Access Problem

Patents help determine access to new medicines in developing countries. Case studies of HIV drug access in India, South Africa, and Brazil show that the presence or absence of patent protection can affect drug prices and access, as well as the development of domestic industry. However, they also demonstrate that other, non-patent, factors cannot be ignored, factors such as the availability of international and domestic financial resources for health care, inadequate infrastructure and staffing needs, and political leadership. Even when companies offer to give away their products, the majority of the drugs can fail to reach the patients in need.

The move towards stronger IPR protections through the TRIPS agreement presents complex issues. There is evidence that strong patents can have a negative effect on affordable prices by delaying the entry of generic options. Industry continually raises concerns that the erosion of patent protections will undermine incentives for product development. Since Africa represents only 1.1 per cent of the global pharmaceutical market (Attaran, 2001), it may seem difficult to see how lower prices in this market significantly impact MNCs' profits. But the real problem is that it is difficult to isolate policies to specific regions. Companies fear that the establishment of lower prices in the developing countries will undercut acceptance of higher prices elsewhere. A related concern is that the comparatively cheap products will not be made available to the domestic populations, but will instead be "reimported" back to rich markets.

Seeking a Coherent Policy

Examples from the way HIV drug access has been addressed (or not) in Brazil, India and South Africa provide useful lessons for those looking for a coherent policy that addresses the needs of developing countries. Each country demonstrates the critical importance of a combination of factors, including health funding, political commitment, and flexibility in implementation of IPR law. Of the three countries, Brazil has had the most success in extending drug access to its population. Its development of domestic public manufacturing capacity and its willingness to use options in trade law has turned the government into a powerful negotiator with patent-owning transnationals.

The Brazil model is less applicable to lower income countries that lack a domestic industry. In these countries, sig-

nificant injection of resources is absolutely necessary, combined with supplies of greatly reduced prices for pharmaceuticals. Political and economic incentives for *differential pricing* (particularly for essential medicines) must play an important role. For example, expanded efforts by industrialized and developing country governments will be needed to prevent re-importation of cheaper drugs to wealthier markets.

A crucial element in achieving reduced drug prices in developing countries has been *generic competition* or its threat. It would be irresponsible to constrain the ability of developing countries to use compulsory licensing for in-country production or importation of generic products necessary to address health priorities.

The question of *compulsory licensing* for product imports was left unresolved at the WTO consultation in Doha, in November 2001. Developing countries without production capacity clearly need to use compulsory licensing for drug importation if they are to meet the health care needs of their populations. It also makes little sense to expect each developing country in the world to have its own production facility for every essential on-patent drug, particularly given the economies of scale in pharmaceutical production.

However, compulsory licenses should not be seen as a "magic wand" for obtaining affordable access to patented medicines in developing countries. Scherer and Watal (2001) have highlighted three limitations. First, compulsory licensees must have the capability to "reverse-engineer" or import the product without the cooperation of the patent owner. Transfer of technology, often recommended as a solution, requires the active cooperation of the patent owner or, in the context of South-South cooperation, of the owner's competitors. Increasingly, larger domestic companies in developing countries are raising their R&D investments and are collaborating with multinational companies to achieve advanced capabilities and reach more markets. Sustainable cooperation will not allow for these companies to undercut their "partners" in other product areas with generic copies.

Second, exports of compulsorily licensed products from large markets destined for small developing countries can only work where the disease patterns are common to both markets.

Third, compulsory licensees will only be attracted to large and profitable drug markets. Thus, essential medicines with small potential volumes or mostly poor patients will not attract many applicants, however important they are from the perspective of public health. Thus, existing and future drugs for most neglected diseases are not likely to be the focus of private generics producers either.

The AIDS pandemic demonstrates the desperate need for policies that foster early and broad access to life saving drugs, as well as the promotion of research on future technologies needed in developing countries. This is the difficult and urgent

challenge to policymakers. As developing countries increasingly demand funding and policy options to increase health care access, and policymakers begin to appreciate the role of health status in creating a more stable world, this challenge of balanced and equitable IPR policy becomes ever more important.

Anthrax and CIPRO — IPR Debates in a New Global Context

One could argue that, with the anthrax attack in October 2001, the US obtained first-hand experience with the complexities of the policy debates surrounding IP for global health. The US saw an immediate need for supplies of a product still on-patent that its owner, Bayer, was unable or unwilling to meet. The US government's first instinct was to consider compulsory licensing. Manufacturers, Cipla in India in particular, claimed they could meet the demand in less time and at a lower price. The US government, in the end, managed a deal with Bayer. By contrast, Canada's government immediately granted a compulsory license to a Canadian generics company (New York Times, October 19, 2001). This move did not follow legal requirements, however, and was withdrawn. Canada also eventually reached an agreement with Bayer.

In the light of the new (or newly perceived) bioterrorist threats, the US government also finds itself lacking effective tools to address specific threats and seeks to take steps to encourage rapid new product development and research. Most of the answers to bioterrorism are "in the hands of the biotech and pharmaceutical world" (*Contra Costa Times*, 10/24). During October 2001, US national headlines portrayed the pharmaceutical industry and the patent system as the key barriers to "national security," while also identifying them as the best opportunity for quick, innovative solutions to scientific problems that until then had no priority and little research. Public funds, infrastructure and support are essential, but not enough to meet the existing and future demands. Private company participation is essential.

What steps are needed to encourage private companies to participate? How can R&D be made affordable, especially for small biotech companies not able to pursue projects just out of patriotic duty? How, at the same time, can affordable supplies of products, new and existing, some on-patent, some not, some in stock, some not, be ensured? The US possesses the political and financial means to mobilize the resources needed in this national "emergency" — though, of course, results are not guaranteed given the uncertainties inherent in drug and vaccine development. At a global level, the exact same types of questions arise in the IPR debates over how to improve health in the developing world. Those countries in greatest need cannot mobilize the resources to solve their regional problems and depend on global solutions. To date, only incomplete answers have been found.

USING IPR TO SOLVE THE R&D PROBLEM

Defining the Problem

Developing new drugs, vaccines and diagnostics is a critical part of a package of steps needed to treat and ultimately eradicate the infectious diseases prevalent predominantly among the poorest segments of the peoples of the developing world.

The primary actors in pharmaceutical and vaccine R&D are public research institutions and private pharmaceutical companies in developed countries. The public researchers contribute primarily to the early discovery stages. Private companies invest in all stages, but dominate the development, production and commercialization processes. The division of labor has changed somewhat over the past 20 years though the relative comparative advantages have stayed the same.

Much evidence shows that diseases such as malaria, TB, leishmaniasis and others are a low priority. Only 5 to 10 per cent of health R&D goes to diseases prevalent in developing countries, and only 1 per cent of new products between 1975-1997 were developed specifically for tropical diseases (Troullier and Olliaro, 1999). In 1998 the peoples of Africa made up 10 per cent of the world's population, but suffered 25 per cent of the disease burden, measured in terms of disease-adjusted life years (DALYs). Of those DALYs lost, 68 per cent were linked to communicable diseases (World Bank 1999, WHO, 1999).

Private companies are not the only actors neglecting these diseases. In $41,887 million of research by the US National Institutes of Health in 2001, only 0.21 per cent went to TB and 1.13 per cent to AIDS vaccines, compared with 10 per cent to cancer, the disease with the largest budget. A joint study by WHO and the International Federation of Pharmaceutical Manufacturer Associations (IFPMA) shows that seven diseases do not have effective drugs on the market and have limited numbers of products, if any, in development: malaria, TB, lymphatic filariasis, onchocerciasis, leishmaniasis, schistosomiasis and African trypanosomiasis (WHO/IFPMA, 2001).

Africa has 10 per cent of the world's population but suffers 25 per cent of the disease burden.

A key factor that discourages private investment for R&D on these diseases is the poor expected return (Kettler, 2000, Kremer, 2001, PIU, 2001, Europe Economics, 2001). Despite high need — a large number of patients — these patients are unable to pay for medicines, and thus expected demand is very low.

Regarding malaria, estimates by Medicines for Malaria Venture (MMV) are that "at most $50 million in annual

returns" would be achieved by "a new drug that sold well in endemic countries, with a low margin, and achieved an aggressive 30 per cent market share in the travelers' market, at a 50 per cent margin". This is "not enough for pharmaceutical companies seeking annual sales potential of $250 to $300 million for a new drug." The market for new TB drugs would be $700 million by the year 2010, according to a recent estimate by the Global Alliance for TB Drug Development (*New York Times*, November 15, 2001).

The public policy challenge is to construct incentives for public and private researchers to invest more aggressively in R&D for new products in the neglected diseases of the poor. In addition to new products, "local development work" is needed to make existing compounds more suitable for the specific circumstances of the country of focus, adjust dosages to local needs, and find combinations more appropriate for local medicine practices (Europe Economics, 2001, 8). Policy discussions have focused primarily on two alternative solutions.

- The first model — the commercial approach — strives to make neglected diseases as attractive as non-neglected diseases to private companies looking to make investment decisions. This requires a package of cost-reducing ("push") and market-enhancing ("pull") policies that provide incentives for more R&D into these diseases and improve its expected profitability;
- In the second model, public-private partnerships (PPPs) are set up to address R&D gaps for specific diseases.

Both models assume that private industry plays a critical role in the R&D process, and that strong IPR, especially patent protection, is required to give companies incentives to participate. This occurs within the current IPR environment where countries with pharmaceutical industries have, or are in the process of introducing, IPR legislation to comply with TRIPS. In both models, creative patent and licensing arrangements should be employed above and beyond the base protection rules to ensure success. Specific details of this are discussed below.

The challenge is to construct incentives for more aggressive R&D on new drugs for the neglected diseases of the poor.

Innovation through Patenting

The message from research-based pharmaceutical and biotechnology companies is clear: without patent protection, there will be no R&D. Two features of pharmaceutical research and development explain why. First, the sunk costs of R&D are high, averaging hundreds of millions

of dollars per new product. The estimate includes the cost of failures and the opportunity cost of funds during the R&D process (Kettler, 1999). This amounts to more than 30 percent of the total cost of developing, producing, and marketing the typical product. Second, although the R&D process is lengthy and risky, most pharmaceutical products once tested and approved for patient use, are relatively cheap to produce. This feature is what permits generic firms to launch products at prices well below the cost of a branded product, immediately following expiration of the patents. Without patent protection and the secured period of market exclusivity, generic products would enter the market immediately following product launch, and bid down prices to marginal cost. Since prices set at the marginal costs of manufacturing do not cover the fixed costs on R&D, the result would be a decrease in R&D, and hence a decrease in new products brought to market.

Although the R&D process is lengthy and risky, most pharmaceutical products once they exist are relatively cheap to produce.

The organization of R&D and the role of IPR in innovation have evolved over time in the pharmaceutical industry. The interplay between "policy regimes", of which IPR is a part, and "technological regimes" has been studied by Lacetera and Orsenigo (2001). They explore how these interactions have contributed to innovative performance and competitive success in the US and Europe during the industry's historical development since before World War II. Their account makes a number of key contributions to our IPR discussion:

- IPR, especially patents rules, are key factors in each stage. The structure of IPR and its influence as an incentive have varied and evolved as science, technological competencies and business strategies have evolved. For example, German companies tended to lead the industry in the first epoch, supported only by process patents that covered limited scientific and technological improvements rather than advanced innovations. In clear contrast, strong, targeted product patent protection in the modern era is one of the central contributors to the US' success in launching a vibrant biotech industry, and its absence is a factor for the Germans' problems in doing the same (Kettler and Casper, 2000).
- There is no one "best practice" in any one time period and no linear relationship between one type of regulation and competitive success. It is the composition of regulation and competencies that are

important. Other important components of the supportive system above and beyond IPR include price, market size, safety and approval regulations, and scientific resources. This suggests that strong patent laws give an advantage to innovators, but are not enough to promote innovations where innovation capabilities and supporting institutions are low or absent. Similarly, achieving high economic returns on innovation is likely to be particularly important for sustaining innovation in highly innovative and competitive environments. There are countries where companies have managed to innovate despite relatively weak patent systems at home (Germany and Switzerland) and others where companies have failed despite strong patent systems (Italy and Japan).

- There is not necessarily only one sustainable business model. Though not industry leaders in terms of R&D innovation or profits, companies in countries like France, for example, have, at least until recently, survived pursuing less innovative strategies based on domestic markets, me-too production, process imitation, inventing around, and the production and marketing of drugs under license or after patent expiration.

These findings raise important questions for the developing countries considering changes to their IPR system. Can we predict how companies in countries with emerging but relatively underdeveloped industries will respond to the introduction of the IPR standard of the globe's leading companies? In the absence of necessary competencies and institutional support, will IPR regulation in and of itself have any effect on developing countries' abilities to conduct R&D and innovation to a global standard? The extent to which countries can pursue "national company strategies" will vary with their dependence on global markets, resources, and competencies to survive. In addition, we know that the relative strength of patent protection influences foreign direct investment (FDI) decisions by US, German and Japanese firms in relatively high-technology industries like chemicals, pharmaceuticals, machinery, and electrical equipment (Mansfield, 1995). For drug and chemical companies, patent protection was important in both the manufacturing as well as the R&D stages.

Will globalization of patent protection affect the global level of pharmaceutical innovation, especially for neglected diseases?

IPR and R&D Capacity in the Developing World

Until recently, a limited number of countries and companies had a pharmaceutical industry, while the rest of the world was consumers. The situation is changing. Even before TRIPS, the production side of the industry had started to become more global. According to a 1991 UNESCO study, only Argentina, India, China, Mexico, and Republic of Korea among the developing countries had industries with innovative capabilities; eight others, including Brazil, Cuba, Indonesia and Egypt, could produce therapeutic ingredients and finished products that were competitive in regional export markets; and 59 countries had no industry at all and were totally reliant on imports to meet their pharmaceutical requirements.

Many proponents of TRIPS argue that a key benefit for developing countries is that it will improve the conditions necessary to attract foreign direct investment and technology transfer, inputs necessary to help develop local R&D capacity. Expected long-term benefits are that stronger IPR will:

- potentially globalize the effort to find cures for disease, bringing in core scientific skills from emerging economies that currently lack incentives to use them. In countries with emerging pharmaceutical industries such as India, Republic of Korea, Brazil, and China, it should encourage researchers to switch from molecule copying to innovative research of new drugs and developing-country versions of existing drugs;
- improve the transfer of, and access to, technology and information from established companies to developing country researchers;
- create jobs for skilled labor and perhaps limit the "brain drain" from developing to developed countries;
- improve international credibility for, and prospects for joint ventures and direct foreign investment in, developing country research.

Pharmaceutical companies refuse to bring products to market in countries where patents are not protected and domestic capacity exists for copying products. In a 1996 study, only 45 of the 434 pharmaceuticals on patent in the UK were made available in India by Pfizer (Mossinghoff, 1996). Case studies of Canada, Mexico, and Republic of Korea suggest that pharmaceutical industry investors consistently located R&D and manufacturing in developing countries that respect IPR, according to Mossinghoff.

Local R&D into Neglected Diseases

It has been argued that developing countries stand to contribute extensively to the global R&D effort in general, and the effort to eradicate neglected diseases in particular. To test the incentive role of patent protection, a study was done on whether the trend in global research into

neglected diseases has changed significantly (and positively), as endemic countries implement strong IPR (Cockburn and Lanjouw, 2000). Given identifiable differences in drug demands in these countries, the authors surmised that changes in the pattern of research expenditures might be expected as a result of strengthening the patent system, and that those changes would be easier to detect and ascribe to policy reform than changes in overall levels of investment.

They find some evidence of new "research activity" in malaria in the 1980s/early 1990s, but none in other tropical diseases. Rather than test the incentive role of patent protection to conduct R&D in general, they may instead have presented excellent evidence that patent protection on its own is not enough to provide incentives for new investment in these neglected diseases.

The Case of India

It seems unlikely that the potential cost advantage of doing R&D in the developing world would encourage emerging companies with R&D capabilities to focus on diseases neglected by the global players, as shown by the Indian example. There are several reasons for this (Kettler and Modi, 2001). In addition to the required fixed investments, companies need to move along a steep and rapidly evolving learning curve in order to achieve the predicted low cost levels. Most Indian companies have done little or no extensive R&D of the type required to discover, develop, and market a new product. Moreover, even if companies were capable of achieving such low costs, moneymaking opportunities would still be much greater for rapidly growing global diseases than for neglected diseases, despite significant differences in cost structure between these categories.

In interviews, executives of India's leading companies revealed a global focus (Lanjouw and Cockburn, 2000). They seek to exploit their traditional experience and cost advantages in the generic drugs market, in improving the drug profile by modifying existing drugs, or in discovering new classes of molecules for well-understood diseases. Those looking to increase their in-house R&D facilities emphasize the importance of major diseases in industrialized countries, e.g. cancer and diabetes. In the USA, for example, marketing approval by the Food and Drug Administration is quick, and even a moderately important discovery is likely to be significantly profitable (Lanjouw, 2000). As of 1999, only 16 per cent of R&D expenditure in India was targeted on tropical diseases or developing-country markets; about half was focused on developing suitable products for diseases of global incidence (Scherer and Watal, 2001).

In India, the Government has given priority to investment in new drug development for diseases of relevance to its population, including tuberculosis, malaria, and leishmaniasis. But without

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explicit targeted incentives, such investment is unlikely to take place. A proposal to establish a support fund through a tax on formulations sold in India would help to fund research in areas of combined high cost and low return, e.g. neglected diseases (Lanjouw, 2000). It is unclear whether the estimated US$ 22 million generated annually by such a scheme would serve as an adequate incentive, and who would decide how to allocate funds.

Potentially large socioeconomic benefits could be gained by enabling private companies and research institutions in endemic regions to contribute to R&D on new treatments. Research facilities in these regions may be comparatively well placed to achieve quick solutions, relying on close contact with other parts of the health sector, on the local epidemiological environment, and on clinical, behavioral, and social sciences tied to both national and global frameworks.

However, creating conditions for innovative and cost-effective drug discovery and development and for a critical mass of companies focused on R&D requires significant investment in facilities, institutions, and skill building. The Indian companies most likely to survive the changes in patent laws are those that can exploit traditional strengths in generic drug production and innovative process development, and find markets in industrialized countries. Driven by the need to earn profits, companies wishing to succeed in drug discovery are likely to target growing and potentially profitable global diseases.

Local solutions to local disease problems seem a long-term prospect at best, and will require more than just the introduction of stronger IPR or even general incentives to conduct R&D. Once capable of managing intellectual property and conducting R&D, companies from developing countries can be expected to focus on diseases where they too can earn profit. To increase the R&D investments committed towards neglected diseases, additional incentives and explicit policies and projects focused on specific diseases are needed.

Large benefits could be gained by enabling private companies and research institutions in endemic regions to contribute to R&D work on new treatments.

Policy thinking has focused on two different R&D models: the commercial model, which provides incentives for "traditional actors" to replicate the R&D process applied to global diseases to neglected ones; and the public private partnership model, which involves a new organization of R&D. Creative IPR policy can serve as an important incentive tool in both models.

Policies to Support the Commercial Model

In the commercial model, the goal is to give private companies incentives to engage in neglected diseases, as they do in other ones, by increasing the expected return on these investments. As in all R&D projects, public and private actors will contribute, but the private profit motive will drive the process. Two types of policies are sought — push incentives to reduce the real cost of doing R&D in these diseases, and pull incentives to increase the expected rate of return (see detailed discussion in Kettler, 2000).

With our focus here on IPR, we focus only on roaming patent exclusivity as part of a modified orphan drug act. An attractive feature of typical orphan drug acts is that they combine push incentives (tax credits, grants, fast-track approval) and pull incentives (guaranteed market exclusivity for 7–10 years) to encourage companies to invest in rare diseases for which there are limited numbers of patients in the respective market. A roaming patent exclusivity clause would allow companies to extend the patent life of a product of their choice for a limited, prespecified period of time in exchange for bringing a neglected diseases product to market and making it affordable to patients in need (Kettler, 2000, WHO-IFPMA, 2001).

In a hypothetical scenario, an international team of experts, perhaps housed at WHO, would prepare and update a list of qualifying disease categories and approve applications for special orphan designation. Individual countries would provide the research grants, tax credits to support the cost of the research and special exclusivity rights as a reward for any effective, affordable product approved for market. A cap could be set on the additional funds companies could earn from the granted patent extension for their other product.

The main problem is that the burden of financing the roaming exclusivity measure falls predominately on the users of the existing drug. Developed country governments would likely face opposition from strong domestic patient groups, as well as the generics industry. A second problem is that this proposal will only be valuable to companies that already have approved products and would exclude small biotechnology companies, for example, that have no products to receive exclusivity rights.

Under any incentive policy, developed countries would subsidize the R&D costs for developing countries to benefit. Two key issues are, first, whether the work is done by public or private organizations, and, second, whether the subsidy will be "hidden" as extra costs to payers and patients using the products with the extra months of exclusivity, or "open" with a grant paid out of general taxation to, say, a purchase fund set up in WHO.

Another question is whether the types of push and pull incentives created in rich countries for transnational corporations would also work in India or other countries with emerging industries. To be most effective, incentives should probably take

explicit account of the distinct cost structures, skills, and strategic capabilities of companies in the developing countries. Also, different policies are needed to encourage the participation of small, often loss-making biotechnology companies, as opposed to transnational corporations. How global incentive packages should be designed and executed are topics for important research in the future.

Policies on Public Private Partnerships (PPPs)

IPR plays a critical role in these new disease-specific initiatives (see Kettler and Towse, 2001). Many PPPs choose to pursue an IP strategy designed to maximize the social value of product and process patents. Arguably one of the most important strategic tools is the partnership research contract, and in particular the IP ownership conditions. Evidence suggests that the PPPs are pursuing some combination of the following strategies:

- acquiring rights over all IP arising from projects directly funded by the PPPs;
- trading rights to rich country markets and use in other indications for low-price access for target markets in developing countries;
- ensuring there are incentives to deliver to these markets — e.g. requiring simultaneous launch in rich and poor countries;
- providing incentives to supply sufficient volume to developing country markets; and
- retaining reversion rights, should commercial partners not deliver on their commitments.

IP is a key tool for pharmaceutical companies in the pursuit of products and profits. PPPs must be as assertive in the way they use IP as any commercial unit, but for a different purpose — the social objective of getting quality, affordable products to developing country patients. This involves the negotiation of creative IP arrangements that do not scare off companies, but also allow the PPP enough control to ensure their ultimate objective, a difficult challenge.

PPPs are breaking into completely new territory with their IP negotiations. The conditions PPPs place on IP negotiations — price guarantees, volume guarantees, and market specifications — are new and risky, and the challenge is how to make it attractive for major companies to do deals. (For details, see Kettler and Towse, 2001.)

THE IMPACT OF IPR ON ACCESS

Studies, most notably the Commission on Macroeconomics and Health and Attaran (2001), suggest that drug patents are not a significant barrier to access to essential therapeutic drugs in the least developed countries. Of the 300 products on the WHO designated Essential Drug List, 95 per cent are off-patent worldwide. Furthermore, cases such as India and HIV drugs demonstrate that even in situations where product patents are not recognized and a flourishing generics industry exists,

patients are not able to access the therapeutics that they need. Health care advocates point to events in Brazil and South Africa, where governments are trying to address the HIV crisis with a package of policies — including taking or threatening to take a compulsory license — to show that patent policies can have an observable impact on product prices and thus, presumably, patient access.

IP is far from the only factor involved in access to medications. The lack of financial resources, health care infrastructure, and political will are also pivotal. Price is, of course, linked to how many resources are available to buy all health care products, including drugs. To the extent that the presence of generic competition brings down the prices set for on-patented products, the introduction of that competition (or its threat) arguably would affect that piece of the equation. Where newer, on-patent treatments are significant therapeutic advances over older off-patent drugs, early access to patentable products affects the health of millions, and thus the seeming conflict between encouraging the development of those new products and ensuring their affordability must be addressed.

When and how does IP affect access to the most appropriate therapeutic drugs needed to treat disease? And what policies are needed to help ensure affordability in view of the harmonization of stronger IP laws of the next few years?

The significance of IP to drug access depends on several country-specific factors. For example, if there are extremely limited financial and health infrastructure resources, and minimal political will to make drugs available, the existence or not of patents will have little effect on access to existing drugs. If a country has some, albeit limited financial resources and infrastructure and a political or private sector commitment to deliver essential drugs, the patent status of those drugs becomes more critical.

The relative importance of patents varies in significance across diseases as well. The treatment of a disease for which effective, off-patent medications are already on the market is not likely to be affected by a country's patent policy. But if some or all of the appropriate drugs for a disease are on-patent, as is the case of AIDS at the moment, the link between patents, price, and access becomes central to the treatment debates.

The Relationship of IP, Price and Access

Several researchers have documented the effect of IP laws on prices for therapeutic drugs. Borrell and Watal looked at private sector sales prices for AIDS antiretroviral medications (ARVs) in 34 developing countries between 1995 and 2000. They found that patents promote local availability of new drugs on the for-profit market, but also result in higher prices. Their study found that "firms doubled mean prices when marketing exclusivity rights are available" and average prices increased by 32 per cent,

raising "a difficult trade-off in poor countries." One response to these findings is that government policy should focus on control of drug prices rather than on actions that undermine the strength of patents. But the fact that IP is closely linked to price means that governments with limited resources may have to include consideration of IP law as they work to secure drug access for their populations.

The presence or absence of generic substitutes can also have a profound impact on the cost of drugs. In a study for Médecins sans Frontières (MSF) of ten essential AIDS drugs in eight countries, Perez-Casas (2000) found that their prices were 82 per cent less than the US price in developing countries with access to generic copies of on-patent drugs. "The presence or absence of generic competition in the market is a key determinant of pricing levels," he wrote. For the combination AIDS therapy d4T+3TC+nevirapine, his 2001 study showed steep price reductions following introduction of low-priced generic versions on the world market. Health groups have argued that it is generic competition, not voluntary drug company price reductions, that have led to steep and sustained price reductions on AIDS therapies in Africa.

What will stronger IP laws mean?

Several researchers have attempted to estimate the effects of stronger IP laws resulting from full implementation of the TRIPS agreement. Scherer and Watal (2001) refer to three studies that predict price increases of 200 per cent or more with the introduction of product patents. The authors conclude that TRIPS will lead to "economic shock" in some developing countries because it will effectively outlaw generic copies of on-patent drugs. The authors argue that generics will have a crucial role to play in ensuring drug access in the future and that "vigorously competitive global markets for generics" are needed to ensure access to therapeutics.

The ultimate personal and social impact of stronger patent regimes will largely be determined by the degree to which new patented drugs represent significant therapeutic advances over off-patent products already available as generics at lower prices. In this specific case, prices may be significantly above competitive levels. In the absence of other pro-access policy actions, millions of people in developing countries will have very limited access to therapeutic advances in biotechnology. It is important to keep in perspective, however, the fact that the majority of these people do not now have access to off-patented, generic products either.

Potential effect of full TRIPS implementation in India

Within the literature on the impact of stronger patent laws on pharmaceutical access, many authors focus on the case of India. New patent laws would arguably

influence domestic access to cheap generic copies of new drugs, and will also affect India's ability to serve as an important exporter of generic drugs to other developing countries. But for the 70 per cent of Indians without access to drugs now, expansion of IP protections is irrelevant (Lanjouw, 1998). Delays in availability of patented medicines produced by transnational corporations in India are not caused by the absence of product patents, but by the transnationals' concerns regarding administrative issues in the country, including potential impediments in winning marketing approval.

Industry reluctance to market drugs in India may also result from concern that lowering drug prices here to make them accessible to a sizable market could undermine higher prices in wealthier countries (*ibid.*). Patent-owning companies may "set prices to maximize global profits, not profits in India."

Watal (2000) has estimated that following the introduction of product IP, prices on patentable pharmaceuticals could increase from 26 to 242 per cent, with a loss in consumer surplus of between $11 million and $67 million, and total "welfare losses" of from $50 million to $140 million. Watal notes that a large proportion of these losses will go to pre-tax foreign profits, and that the existence of substitute medications for on-patent products is a critical factor in price effects. Fink also predicts significant effects, noting that large losses to consumers are possible, but pointing out that in India patented products represented only 10.9 per cent of pharmaceutical sales in 1993.

AIDS as a Case Study

AIDS is the most deadly infectious disease in the world, claiming 8,000 lives each day, over 95 per cent of them in the developing world (UNAIDS, 2000). An analysis of the availability of AIDS medications in developing countries well illustrates the complex issues of IP and access. A variety of drugs, typically combined in a "cocktail," have been shown to improve and prolong the lives of people living with HIV disease. Some of the drugs commonly used in AIDS treatment were developed years ago and are not widely subject to patent protection. Others, including most protease inhibitors that have revolutionized treatment, were launched recently and remain on-patent in most industrialized countries. Unlike malaria and TB treatments, there is a large market for AIDS drugs in industrialized countries, so discussions concerning price-tiering or weakening of IP for these drugs raise deep concerns with patent holders of AIDS drugs.

A mix of lessons can be learned from a look at three case studies: India, South Africa, and Brazil. In general, these cases show that IP, financial resources, infrastructure and political will all play key roles in determining access to AIDS drugs.

India

India's Patent Act of 1970 made pharmaceutical products unpatentable,

engendering a large generic drug industry focused on copying on- and off-patent medications. An estimated 200 pharmaceutical companies now operate on the national level, and approximately 23,000 compete at the regional level, according to de Souza. India has taken the option to delay full implementation of TRIPS until January 1, 2005, so domestic drug companies can produce generic versions of drugs that are on-patent elsewhere until that date.

The Joint United Nations Programme on HIV/AIDS (UNAIDS) estimated that in 2000 there were 3.7 million people living with HIV or AIDS in India, or 0.7 per cent of the adult population. Indian companies making generic drugs used in AIDS therapy have offered to sell them to patients in other developing countries at prices far below those charged by patent-holding transnational companies. Yet these lower-priced products have not resulted in widespread drug access to therapeutic drugs for AIDS and other diseases among India's poor.

The international pharmaceutical industry points to this evidence to support their position that the mere presence of a strong generics industry ensures access to drugs. The International Federation of Pharmaceutical Manufacturers Associations (IFPMA) has noted that "If patents were indeed the problem, large populations within India and similar countries should have easy access to...copied, generic versions of AZT and other medications."

South Africa

In the midst of a horrific AIDS epidemic, South Africa provides a dramatically different example. As of 2000, UNAIDS estimated that 4.2 million people (or 20 per cent of the adult population) in the country were infected with HIV. The vast majority of people living with HIV do not have access to AIDS medications, and the government has been widely criticized for its failure to act more aggressively to make AIDS drugs available, including drugs to prevent mother-to-child transmission.

The South Africa case demonstrates the importance of adequate financial and infrastructure resources in meeting the needs of people living with HIV. Yet in the extremely resource-constrained environment of South Africa, the interaction of IP policy and drug prices clearly impacts drug access. South Africa has traditionally had a strong IP regime relative to other developing countries, and patented versions of many drugs produced by transnationals are available for sale there. South Africa is also known for its high prices for patented drugs — long thought to be among the highest in the world as compared with other developing countries (Gray, 2000). A survey of AIDS drug prices by MSF found that a one-gram vial of Ceftriaxone is US$10.90 in South Africa, and US$1.80 in India as a generic. Fluconazole is 14 times more expensive in South Africa than in Thailand, where it is sold as a generic (Perez-Casas, 2000).

High consumer drug prices are blamed on strong IP laws, but also high distribu-

tion chain costs, including mark-ups between initial sale and retail price. South Africa has considered the introduction of controls on drug mark-ups, of taking steps to encourage sale of generic substitutes where available, and of allowing parallel importing under some circumstances. Compulsory licensing is technically already permitted within the existing Patents Law.

Debates continue about the relative importance of patents on South African drug access. Infrastructure and financial resources are the most pressing issues with regard to AIDS drug access in South Africa, according to an International Intellectual Property Institute (IIPI) paper. IIPI argue that in South Africa TRIPS compliance already permits expanded access by means of compulsory licensing and parallel imports. In response, South African's Treatment Action Campaign (TAC) has argued that ARVs are not available in the public sector medical system largely because of cost, which they claim is closely related to the strong patent system in their country. TAC has also claimed that "the scope of TRIPS is sufficiently complex to allow pharmaceutical companies to pursue time-consuming, costly legal action", with the goal of delaying implementation of alternatives (Geffen, 2001).

In an attempt to introduce more evidence into this debate, Attaran and colleagues at Harvard University conducted a controversial study of the patent status of 15 ARVs in 53 countries. They concluded that patents do not appear to be the primary factor restricting access to ARV treatments in most African nations. They found that patents in most countries did not cover these drugs and that patent coverage is not correlated geographically with ARV treatment access. Attaran and colleagues conclude that "a variety of de facto barriers are more responsible for impeding access to antiretroviral treatment." Their list includes but is not limited to "the poverty of African countries, the high cost of antiretroviral treatment, national regulatory requirements for medicines, tariffs and sales taxes, and, above all, a lack of sufficient international financial aid to fund antiretroviral treatment."

Five health advocacy groups (the Consumer Project on Technology, Essential Action, Oxfam, Treatment Access Campaign, and Health Gap) responded to the Attaran article with a joint statement (2001) claiming that several combinations of AIDS treatments were not adequately included in the published survey. Their statement also emphasizes the special circumstance of patents in South Africa, and the role of that country in the region:

> *In South Africa every three-drug ARV cocktail is blocked by patents…The South Africa market is important for several reasons. First, there are 4 to 5 million HIV+ persons in South Africa. Second, the South Africa economy has more than 40 percent of the GDP for sub-Saharan Africa, a per capita income of more than $3,000 and a rel-*

atively good health care infrastructure, making ARV treatment feasible if drug prices are low enough. Third, entry into the South Africa market is necessary for generic suppliers to reach the economies of scale (volume) needed for the most efficient production. This is particularly true for those products with post-1996 patents, such as efavirenz or nelfinavir, that currently lack a significant generic market outside of Africa.

In 2000 and 2001, transnational corporations reduced the price on a number of Aids drugs sold in Africa. Many health advocates argued these price cuts were motivated by earlier offers from generic companies, including Cipla and Aurobindo. Oxfam (2001) noted that even with the new drug company price cuts, AIDS triple combination therapy would cost African governments $1,000 per person annually, still more than three times higher than the cheapest offer from the Indian generic company Aurobindo.

Local manufacture of generic AIDS drugs in Brazil reduced their prices by 72.5 per cent from 1996-2000. Their use avoided 146,000 hospitalizations and saved $422 million from 1997-1999.

Brazil

Brazil is often held up as an example of how developing countries can both respect patent law and expand access to new drugs. In 1996, to comply with international agreements, Brazil passed strong patent laws, steps highly praised by industry observers. But the Brazilian patent law stipulated that patents for drugs commercialized before May 14, 1997 would remain off-patent in the country.

In 2000, UNAIDS estimated that 530,000 Brazilians, or 0.57 per cent of the adult population, were living with HIV. Since 1996, the government has been officially committed to provide AIDS treatment to all citizens and has implemented a broad-based AIDS treatment program. To make pharmaceuticals affordable, the government uses its public manufacturing plant, Far-Manguinhos, to produce drugs that are off-patent in the country. Brazilian public health officials have also shown willingness to threaten compulsory licensing and domestic production of on-patent drugs in their negotiations with pharmaceutical companies.

The Brazilian Ministry of Health (2001) estimates that, because of expanded availability of ARVs, 146,000 hospitalizations were avoided from 1997-1999, saving $422 million. It claims that price reductions in AIDS drugs are due to the establishment of national manufacturing labs and effective negotiation of prices with companies. AIDS drugs made in Brazil fell 72.5 per cent in price from

1996 to 2000. Imported drugs fell 9.6 per cent during the same period.

Brazil's AIDS drugs budget shows the price differentials between off-patent domestically manufactured therapies and imported on-patent drugs. AIDS therapies produced in the country represent 47 per cent of ARVs used, but consume only 19 per cent of total AIDS drug spending. AIDS drugs purchased from transnational corporations represent 53 per cent of ARVs used, and consume 81 per cent of expenditures (Ministry of Health, 2001). In its analysis of drug prices, MSF (2000) found that locally produced ARVs in Brazil are sold at fraction of the global price. Combination ARV therapy is produced locally in Brazil, but in Thailand the same ARVs are not available as generics. As a result, according to MSF, it costs the same in Brazil to treat 1,000 people with HIV/AIDS as it does for the Thai government to treat 552 people.

Brazil has effectively used price controls and threats of compulsory licensing as bargaining chips to negotiate with transnationals for lower AIDS drug prices. A presidential decree on compulsory licensing enables the government to override market exclusivity of patents and authorize third-party production on the grounds of public interest or national emergency. A recent successful negotiation was the agreement with the pharmaceutical company Roche on a 40 per cent price cut for the ARV nelfinavir after Brazil threatened to break the patent and produce the drug itself. "Just the credible threat of generic competition is enough to get manufacturers to lower their prices" (*New York Times*, January 28, 2001).

Toward balanced policies

Current literature and lessons from India, South Africa and Brazil demonstrate that the presence or absence of patent protection is one of several important factors that have affected drug prices and access, as well as development of domestic industry. Though patents are important, it is possible to overemphasize their effect on drug access and ignore other important factors such as the availability of international and domestic financial resources for health care, infrastructure needs, and political leadership.

The move towards stronger IP protections through the TRIPS agreement presents complex issues. There is evidence that strong patents have had a negative effect on affordable prices. Industry continually raises concerns that the erosion of patent protections will undermine incentives for product development. Since Africa represents only 1.1 per cent of the global pharmaceutical market, it is difficult to see how lower prices in this market significantly impact transnationals' profits. The real fear is that lower prices will undercut acceptance of higher prices elsewhere, and could lead to a flowback of cheap drugs to richer markets. Political and legal actions are needed to address both concerns.

Developing countries have a clear stake in product development for diseases

affecting their populations. By themselves, stronger patents in developing countries are unlikely to provide adequate incentives for the private sector to significantly expand research on treatment and vaccines for tropical diseases. Yet patents may well be an important part of a comprehensive package of incentives necessary to increase industry work on diseases of the poor.

In looking for a balanced policy that addresses the needs of developing countries, the examples from the three countries above demonstrate the critical importance of a combination of factors, including health funding, political commitment, and flexibility in implementation of IP law. Of the three countries, Brazil has shown the most impressive successes at extending drug access to its population. In this case, the development of domestic public manufacturing capacity and willingness to use options in trade law have allowed the government to be a powerful negotiator with patent-owning transnationals. One goal of a balanced IP policy might be to encourage flexible policies that acknowledge patent rights, but also provide options that strengthen the negotiating hand of developing countries with transnationals. However, the price that the company charges to a country distributor is often a fraction of the final price charged to the patient.

The Brazil model is less applicable to lower-income countries without domestic industry. In these countries, significant injection of resources is absolutely necessary, combined with greatly reduced pharmaceutical prices. Political and economic incentives for tiered pricing can play an important role here, particularly for essential medicines, and there is evidence that interventions will be needed to encourage greater use of tiered pricing.

The AIDS pandemic demonstrates the desperate need for policies that foster early and broad access to life-saving drugs, as well as the promotion of research on future technologies. This is the difficult and urgent challenge to policymakers. Yet there is little justice in demanding that populations in developing countries forgo access to today's AIDS drugs in order to promote future R&D on products that would also be inaccessible to many in these countries.

TRIPS and other international trade agreements will remain a priority for industrialized countries, yet they are not ultimately sustainable unless greater equity in the delivery of health care technology is achieved. As developing countries increasingly demand funding and

There is little justice in demanding that developing countries forgo access to today's drugs so as to promote future R&D on products that would also be inaccessible to many in these countries.

policy options to increase health care access, and policymakers begin to appreciate the role of health status in creating a more stable world, this challenge of balanced and equitable IP policy becomes ever more important.

CONCLUSIONS

The R&D and access issues discussed above are among the broad set of factors affecting health in the developing world. A critical challenge, well recognized by all involved, is to find a balance between IPR rules that allow for affordable access to new, on-patent technologies, while continuing to protect companies and other institutions that have invested in a risky and lengthy research effort and demand a return on that investment. Steps to cut prices for existing products now may jeopardize incentives for companies to develop new products for the future. And patients suffering from one of the neglected diseases can only hope for new products, as effective treatments currently do not exist.

Only a few of the priority "diseases of the poor" fall into the category of diseases with truly global markets and where differential pricing (or the threat of compulsory licenses) are part of the access debate. The most important example is HIV.

For diseases which predominate in developing countries, and for which no effective treatments currently exist, affordability and access are legitimate concerns, but for now the primary issue is how to realize new products through R&D. Creative ways to attain the "dynamic innovative" opportunities of IPR are needed. Regardless of the incentive package, it must include explicit conditions to help ensure that any approved product of the research be affordable to the patients in need.

TRIPS and other international trade agreements are not ultimately sustainable unless greater equity in the delivery of health care technology is achieved.

Governments in both the north and the south working to design effective IPR policies for global health must consider the short and longer-term impacts of IPR policies. IPR policies are critical in shaping the path of domestic industry development. Ironically, governments of developing countries may feel pressured to choose between an IPR policy that could help promote domestic-based research industries and investment (and arguably long-term economic development) and one that some argue will help improve immediate access to products now, and thus the health of their population. Looking closely at the role IPR plays in the global health debates, policymakers need clearly identified goals, an understanding of what motivates the necessary partici-

pants, and a willingness to accept that IPR is only one of a necessary package of instruments they need to consider.

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Pricing Medicines to Benefit Poor Countries*

BY JAGDISH BHAGWATI

What are appropriate ways of pricing drugs for diseases, such as malaria, which mainly exist in the poor countries, and for those diseases, such as AIDS, which afflict rich and poor countries alike? In the latter case, it is in the interests of poor countries to segment the market so as to assure them of lower prices. This is the argument made by Jagdish Bhagwati, a University Professor at Columbia University, whose latest book is Free Trade Today *(Princeton).*

THE DEBATE on intellectual property protection and medicines for the poor countries is part of a general debate on how much intellectual protection there should be and whether it should have been built into the World Trade Organization. But, of course, it also raises some issues specific to medicines.

The argument for intellectual property protection (IPP) is that, since it costs money to invent knowledge and the widespread diffusion of knowledge once secured is desirable, we have here the economist's trade-off: more IPP means more knowledge, but it also reduces diffusion. The social optimum lies somewhere in the middle, as often. Few economists believe that the 20-year patent length agreed upon at the conclusion of the Uruguay Round at Marrakesh in 1995 is anything but excessive from this viewpoint. Yet the pro-IPP lobbies, among whom the drug companies were vociferous, used their political

* A shorter version of this article appeared in the *Financial Times* of 10 September 2002, entitled "Patents and the Poor".

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muscle to have this agreement.

Most poor countries were not enthusiastic about IPP, just as the United States had been historically when it was a user rather than a producer of know-how. Poor countries objected to intellectual property protection being provided as part of a trade package — the Trade-related Intellectual Property (TRIPs) agreement in the WTO. IPP is not a trade issue; and the WTO ought to be about lowering trade barriers and tackling market access problems that will often go beyond border measures to internal regulations: a thorny issue. Trade-related Investment Measures (TRIMs) is by contrast only about royalty collection. It was put into the WTO by considerable lobbying pressure, in the United States in particular, so as to provide for the use of trade sanctions against user countries who used knowledge without paying royalty. It turned the WTO, therefore, into a royalty-collection agency! To the chagrin of the poor countries today, the result has been the proliferation of yet other lobbies, such as labour unions, which would like to have their own agendas built into the WTO, to follow in the path of the IPP lobbies. The poor countries therefore see the WTO as increasingly the target of Western lobbies that would capture the WTO to their own advantage, using the specious arguments that their causes have to do with trade in some intrinsic way — all courtesy of the IPP lobbies, drug companies included.

But one must say that the very premise that drug companies are seriously handicapped in their R&D by the lack of IPP in the poor countries is flawed. Poor countries have need, but no effective demand. There is little money to be made to recover normal profits on your invented drugs, if you think of poor country markets. To see why the drug companies nonetheless see IPP in the poor countries as a money-spinner, it is necessary to distinguish between two types of diseases: those, such as malaria, which are primarily in the poor countries, and those, such as AIDS, which afflict rich and poor countries alike.

The argument that drug companies are seriously handicapped in their R&D by the lack of intellectual property protection in the poor countries is flawed.

For the former, evidently IPP cannot assure any decent return because the poor countries cannot pay. So, we have several ways of getting drugs invented for them by using public and quasi-public moneys to mobilize scientists (and firms) to address the task. In the old days, you had institutions like the Institute for Tropical

Medicine in England. The Nobel laureate Norman Borlaug was financed by Foundation moneys to help invent the new seeds that made the Green Revolution. Michael Kramer of Harvard University has proposed the setting up of guaranteed remunerative prices for invented vaccines. All of these are variations on the use of public moneys; IPP has no useful role to play in the provision of drugs specific to poor countries.

But everything changes when drugs to fight diseases that cut across the rich and poor nations are at stake. Here, the drug companies make money in the rich country markets; IPP there is clearly something they value. But then they see piffling effective demand for those drugs in the poor countries. So, their strategy is to sell there, producing at very low marginal costs and then charging the little that these poor markets will bear.

But they would like to raise *that* return as much as they can. The way is to increase effective demand by using aid moneys addressed to health programs, so that the excess of what they will charge over their marginal cost is increased, raising profitability in the poor country markets. Medical economists have known for years that medical groups, for instance, favour insurance schemes that improve the patients' ability to pay (such as Blue Cross and Blue Shield insurance programs in the US), but oppose insurance schemes like the National Health Service of England, which instead reduce the returns to doctors.

IPP in the poor countries comes into play when they want to shut off the more advanced of the poor countries, such as India and Brazil, from coming into Botswana and Gabon and providing, with their generic copies, the same drugs at low prices that effectively put a cap on how far the drug companies can raise their prices. So, they would like to stop Indias and Brazils through IPP applied there; and they prefer also restrictions on whether the Indias and Brazils can export to the poor countries.

What about parallel imports? Should the drug companies be allowed to segment rich and poor country markets for such drugs, preventing the importation into rich countries of drugs they sell at lower prices in the poor countries? The answer has to be a resounding yes. If there were no such segmentation, the poor and the rich countries would be a single market, and the prices charged to the poor countries would rise. The segmentation enables poor countries instead to secure low prices from the drug companies. This is something that the rich-country nongovernmental organizations concerned about poor countries must understand. There are often paradoxical ways to effectively help the poor; this is one of them.

Capacity Building FOR MANAGEMENT OF Intellectual Property Rights

BY MART LEESTI AND TOM PENGELLY

There is a broad range of experience to share among developing countries concerning strategies and structures for the management of intellectual property rights (IPR). Based on a background paper for the Commission on Intellectual Property Rights (CIPR), this article captures the state of the art and offers guidelines for future improvements. It draws on several case studies in developing countries, available literature, and interviews with representatives from relevant international organizations, as well as developing country IPR managers. The authors are Mart Leesti, a consultant on intellectual property administration, who was the first Chief Executive Officer of the Canadian Intellectual Property Office; and Tom Pengelly, who was a Policy Analyst with CIPR, and has worked in four developing regions for the UK Department for International Development and other agencies.

DESIGNING IPR REGIMES IN POOR COUNTRIES: POINTS OF DEPARTURE

There are five fundamentals to consider in the design of intellectual property regimes in developing countries.

1. Balancing incentives for IPR holders with access for users

IPRs exist to strike a balance between the needs of society to encourage innovation and commercialization of new technologies, products, artistic and literary works, and to promote the use of those items. Empirical evidence, while inconclusive, suggests that stronger IPR regimes can generate both benefits and costs for poor countries. On the benefits side, stronger IPR regimes can lead to greater trade and inflows of foreign direct investment (FDI), as well as more transfers of technology, which in turn increases produc-

tivity performance. On the costs side, IPRs can reduce social welfare by restricting access to protected technologies and knowledge, and by raising prices for items essential to poor people's livelihoods like medicines, agricultural inputs and educational materials.

The implication of this for designing IPR policies, legislation and institutions is that poor countries require quite sophisticated technical expertise and decision-making processes in order to formulate policies and laws that carefully balance public policy objectives and stakeholder interests in the context of economic and technological development. As a recent article put it:

> *"Normally, society opposes monopolies because they create artificial scarcity and raise prices for consumers. Intellectual property, on the other hand, creates monopolies to encourage new products. The trick is to get the best possible bargain by restricting new rights to products that are valuable and cannot be obtained by other means. Careful legislators do this by imposing threshold requirements (such as novelty and creativity) that dole out rights as sparingly as possible." (Maurer et al, 2001)*

Moreover, the level of sophistication required is increasing as the realms of intellectual property protection expand following technological or political change. For example, it is not a simple task for a government minister responsible for intellectual property in an LDC to decide whether his country should, say, develop a new system for protecting its traditional knowledge or extend copyright laws to protect electronic databases.

2. Low levels of domestic intellectual property creation

A second point of departure is that poor countries can devote few resources to innovation and that they generate very low levels of (industrial) intellectual property that could be protected by the formal system of patents, trademarks etc. (Poor countries may generate other kinds of knowledge, but these are outside the formal IPR system and harder to measure.) While there are of course huge differences between the innovation capabilities and the volume of IPR applications in countries like Taiwan, South Africa and Eritrea, table 1 shows that almost 90 per cent of patents granted in 2000 in the US (the world's biggest single market) originated from the USA, Europe and Japan. Poor countries are essentially users, not producers, of innovation. As table 2 shows, their IPR regimes will essentially protect knowledge assets produced in the industrialized countries for some time to come.

3. Capturing benefits from IPRs through holistic institutional frameworks

Developing countries need more than just the minimum institutional capacities required to provide a reasonably smooth system for administration and enforce-

TABLE 1: GRANTS OF US PATENTS BY COUNTRY OF ORIGIN, 2000

Country	Total US Patents grants (Number)	Total US Patents grants (%)
USA	96,920	55.07%
Japan	32,922	18.71%
European Union	27,190	15.45%
Other Developed Countries[a]	6,695	3.80%
Taiwan	5,806	3.30%
South Korea	3.472	1.97%
Israel	836	0.48%
China	711	0.40%
Eastern Europe[b]	355	0.20%
Singapore	242	0.14%
India	131	0.07%
South Africa	124	0.07%
Brazil	113	0.06%
Mexico	100	0.06%
Other Developing Countries[c]	365	0.21%
Least Developed Countries[d]	1	0.0006%
Total All Countries	**175,983**	**100.00%**

Source: USPTO Information Products Division.

[a] Australia (859), Canada (3923), Gibraltar (1), Iceland (18), Liechtenstein (19), Monaco (15), New Zealand (136), Norway (266), Switzerland (1458).

[b] Belarus (3), Bulgaria (1), Croatia (6), Cyprus (1), Czech Republic (41), Czechoslovakia (10), Estonia (4), Hungary (38), Latvia (1), Lithuania (2), Malta (2), Poland (13), Romania (4), Russian Federation (185), Slovakia (4); Slovenia (18), U.S.S.R. (1), Ukraine (17), Yugoslavia (4).

[c] Arab Emirates (2), Argentina (63), Aruba (2), Azerbaijan (1), Bahamas (14), Bahrain (1), Bermuda (2), Bolivia (2), Cayman Islands (8), Chile (16), Colombia (11), Costa Rica (8), Cuba (3), Dominica (1), Dominican Republic (5), Egypt (8), Guatemala (2), Honduras (1), Indonesia (14), Jamaica (2), Kazakhstan (4), Kenya (3), Kuwait (8), Kyrgyz Republic (1), Lebanon (4), Malaysia (47), Morocco (2), Namibia (1), Netherlands Antilles (2), Nigeria (2), Pakistan (5), Palau (1), Panama (2), Peru (3), Philippines (12), Qatar (1), Saint Kitts and Nevis (1), Saudi Arabia (19), Sri Lanka (5), Syria (4), Thailand (30), Turkey (6), Turks and Caicos (1), Uruguay (1), Uzbekistan (2), Venezuela (32).

[d] Guinea (1). However, information from the UK Patent Office suggests this is an error and the patent application (for a seed-separating device) originated from Papua New Guinea, a developing country. If correct, this would mean that none of the 175,983 US patents granted in 2000 originated from an LDC.

ment of IPRs. Rather, they require a wider institutional framework which provides three capacities:

- (a) to regulate IPRs and ensure open, contestable markets for goods and services essential to

TABLE 2: PATENT APPLICATIONS AND GRANTS IN SELECTED LEAST DEVELOPED COUNTRIES, 1998

Country	Applications			Grants		
	Residents	Non-Residents	Total	Residents	Non-Residents	Total
Bangladesh	32	184	216	14	126	140
Gambia*	5	60267	60272	1	17	18
Lesotho*	6	67485	67491	0	36	36
Malawi*	7	67753	67760	0	80	80
Sudan*	6	67713	67719	0	64	64
Uganda*	7	67603	67610	0	66	66
Zambia*	7	86	93	1	19	20

Source: WIPO website (note: data only available for a small minority of WIPO LDC member states, hence the small sample).

* Member of the PCT (Zambia only acceded to the PCT in 2001, and this explains the low level of applications in 1998). Although the total numbers of applications in the PCT member countries shown appear very large, only a very much smaller number of these enter into the "national phase" where action is required by national offices involving the grant of a substantive patent in the country concerned.

poor people's livelihoods (through instruments such as competition policy and compulsory licensing, for example);

- (b) to support development of national innovation capabilities by maximizing access to technologies and knowledge assets protected by IPRs (through subsidized patent information services and support to upgrade technology transfer capabilities in universities, for example);
- (c) to strengthen research and education institutions and conduct public awareness campaigns.

India illustrates efforts to develop a holistic approach which includes investing substantial sums in modernizing the national IPR administration agencies, establishment of five university chairs on intellectual property in various regions of the country, and creating a National Innovation Foundation aimed at encouraging innovations to solve local problems and building a national register of innovations and outstanding traditional knowledge.

4. IPRs as private rights

A fourth point of departure is that intellectual property rights are private rights, as articulated in the preamble to the Agreement on Trade-related Intellectual Property (TRIPS) under the World Trade Organization. Thus, IPR regimes should lean heavily towards resolving disputes over intellectual

TABLE 3: THE 49 LDCS AND THEIR MEMBERSHIP OF SELECTED INTERNATIONAL IPR TREATIES

Country	WIPO	Regional agreements	Paris	Berne	Madrid	Hague	UPOV	PCT
WTO members (TRIPS by 1 January 2006)								
Angola	Yes	No	No	No	No	No	No	No
Bangladesh	Yes	No	Yes	Yes	No	No	No	No
Benin	Yes	OAPI	Yes	Yes	No	Yes	No	Yes
Burkina Faso	Yes	OAPI	Yes	Yes	No	No	No	Yes
Burundi	Yes	No	Yes	No	No	No	No	No
Central African Rep	Yes	OAPI	Yes	Yes	No	No	No	Yes
Chad	Yes	OAPI	Yes	Yes	No	No	No	Yes
Congo (DR)	Yes	OAPI	Yes	Yes	No	No	No	No
Djibouti	No	No	No	No	No	No	No	No
Gambia	Yes	ARIPO	Yes	Yes	No	No	No	Yes
Guinea	Yes	OAPI	Yes	Yes	No	No	No	Yes
Guinea-Bissau	Yes	OAPI	Yes	Yes	No	No	No	Yes
Haiti	Yes	No	Yes	Yes	No	No	No	No
Lesotho	Yes	ARIPO	Yes	Yes	Yes	No	No	Yes
Madagascar	Yes	No	Yes	Yes	No	No	No	Yes
Malawi	Yes	ARIPO	Yes	Yes	No	No	No	Yes
Maldives	No	No	No	No	No	No	No	No
Mali	Yes	OAPI	Yes	Yes	No	No	No	Yes
Mauritania	Yes	OAPI	Yes	Yes	No	No	No	Yes
Mozambique	Yes	ARIPO	Yes	No	Yes	No	No	Yes
Myanmar	Yes	No	No	No	No	No	No	No
Niger	Yes	OAPI	Yes	Yes	No	No	No	Yes
Rwanda	Yes	No	Yes	No	No	No	No	No
Senegal	Yes	OAPI	Yes	Yes	No	Yes	No	Yes
Sierra Leone	Yes	ARIPO	Yes	No	Yes	No	No	Yes
Solomon Islands	No	No	No	No	No	No	No	No
Tanzania	Yes	ARIPO	Yes	Yes	No	No	No	Yes
Togo	Yes	OAPI	Yes	Yes	No	No	No	Yes
Uganda	Yes	ARIPO	Yes	No	No	No	No	Yes
Zambia	Yes	ARIPO	Yes	No	Yes	No	No	Yes
Non-WTO members								
Afghanistan	No	No	No	No	No	No	No	No
Bhutan*	Yes	No	Yes	No	Yes	No	No	No
Cambodia*	Yes	No	Yes	No	No	No	No	No
Cape Verde*	Yes	No	No	Yes	No	No	No	No
Comoros	No	No	No	No	No	No	No	No
Equatorial Guinea	Yes	No	No	Yes	No	No	No	Yes
Eritrea	Yes	No	No	No	No	No	No	No
Ethiopia	Yes	No	No	No	No	No	No	No
Kiribati	No	No	No	No	No	No	No	No
Laos*	Yes	No	Yes	No	No	No	No	No

TABLE 3: *continued*

Country	WIPO	Regional agreements	Paris	Berne	Madrid	Hague	UPOV	PCT
Liberia	Yes	No	Yes	Yes	Yes	No	No	Yes
Nepal*	Yes	No	Yes	No	No	No	No	No
Samoa*	Yes	No	No	No	No	No	No	No
Sao Tome & Principe	Yes	No	Yes	No	No	No	No	No
Somalia	Yes	ARIPO	No	No	No	No	No	No
Sudan*	Yes	ARIPO	Yes	Yes	Yes	No	No	Yes
Tuvalu	No	No	No	No	No	No	No	No
Vanuatu*	No	No	No	No	No	No	No	No
Yemen*	Yes	No	No	No	No	No	No	No
Total memberships (all LDCs)	**41/49 (84%)**	**22/49 (45%)**	**32/49 (65%)**	**23/49 (47%)**	**7/49 (14%)**	**2/49 (4%)**	**0/49 (0%)**	**23/49 (47%)**

Source: WTO website, WIPO website

* In process of accession to WTO.

property assets between parties under civil law, and so reduce the enforcement burden on the state to the minimum. In practical terms, this means an intellectual property infrastructure which has the capacity to grant IPRs with a high presumption of validity, keep accurate and readily accessible registries and records, and correct defects in IPR titles through administrative rather than judicial means where possible. It also highlights the need for rights holders (particularly large corporations) and their collective management organizations to cooperate proactively with enforcement agencies in poor countries, which typically may be under-resourced for their total duties under the criminal system. Equally, rights holders will need access to effective legal professional services to assist them in managing their IPRs.

5. Compliance with international obligations

In common with other areas of public policy such as the environment or trade, the design of national intellectual property regimes is in part determined by international rules and standards to which the country has committed itself. There are international treaties — and they are constantly being added to — for almost every form of intellectual property rights, such as the Paris Convention (industrial property), the Berne Convention (copyright), the Patent Cooperation Treaty (patents), and so on. Over time, and partly as a consequence of their colonial history, a majority of developing countries, including even the least developed, have become members of one or more of these treaties — a gradual process, as the Paris and Berne Conventions originate from the end of the 19th century. Table 3 shows

the membership of the 49 LDCs in some of the main international treaties on intellectual property rights. At the time of writing, about 100 developing countries and 30 LDCs are party to the WTO TRIPS Agreement, while more are moving to join WTO and thus also TRIPS in due course (WTO website).

INSTITUTIONAL CHALLENGES IN DEVELOPING COUNTRIES

Two issues of particular importance have systemic impacts across the operation of all aspects of the national institutional infrastructure.

First, developing countries typically do not have sufficient intellectual property expertise in their national academic or educational institutions. Perhaps partly as a result, they have few, if any, local legal professionals specialized in intellectual property disciplines. For example, in Jamaica, not a single trained Patent Agent is practicing in the legal community. Professional education and training in intellectual property subjects is not available anywhere in the entire Caribbean region.

Second, although the situation is improving, there still tends to be low awareness in poor countries about the intellectual property regime (its operation, costs, and benefits) among key stakeholder groups, such as the business sector, the scientific community and public officials, and about intellectual property rights *per se* among the general population (e.g. that buying counterfeit music cassettes is illegal).

Policy and legislation development

Policy/lawmakers in most developing countries have a formidable forward agenda in intellectual property reform. Implementation of the TRIPS Agreement has required and will require changes in industrial property and copyright legislation, including wholesale new legislation in some instances. In addition to TRIPS, countries not already members of international treaties like Paris, Berne, Madrid, PCT, Hague, UPOV, etc., may choose to join, and this will require further legislative change.

Beyond compliance with international obligations, almost all developing countries are facing choices about adopting other intellectual property reforms, such as protection of traditional knowledge; regulation of access to national biological resources and benefits sharing under the Convention on Biological Diversity; and legislation to modernize IPR administration (e.g. creating a semi-autonomous agency). Policy/lawmakers may also have to consider wider reforms to related domestic regulations, such as science and technology policy and antitrust legislation. According to the WTO website, only about 50 developing countries and transition economies have so far adopted specific competition laws (although certain countries may deal with IPR-related restrictive business practices within existing intellectual property legislation).

To address these challenges effectively, developing countries require sophisti-

cated technical and analytical capabilities; a coordinated approach to policy-making across government; and a process that facilitates participation by different stakeholder groups in the private sector, academia and civil society. To what extent do developing countries, especially the poorest, have the institutional capacity to meet these requirements?

Responsibility for intellectual property policy in most developing countries, particularly LDCs, falls to ministries with lead responsibility for international trade and/or foreign affairs. Perhaps as a result, such countries typically do not have substantive policy documents dealing with intellectual property issues. Instead, government policy is a compound of existing legislation, membership of international treaties, and statements by government officials.

Development of legislation and regulations is generally delegated to departments or agencies responsible for IPR administration. Developing country WTO members have completed much of the legislative reforms required for implementing the TRIPS Agreement and did this within the transition period ending 1 January 2000. However, there is less information on such reforms by least developed countries, which have leeway for implementing the TRIPS agreement during a transition period ending 1 January 2006. Most countries' progress in making reforms and preparing new legislation relied considerably on technical assistance from bilateral donors like USAID and international organizations; a main source was WIPO, which helped at least 134 developing countries between 1996 and 2000 (WIPO, 2001a).

Looking to the wider reform agenda, few developing countries have so far drafted legislation to regulate access to biological resources and benefits sharing under the Convention on Biological Diversity (CBD), and even fewer have done so for protecting traditional knowledge (Peru, Guatemala and Panama, for example). While many developing countries are preparing CBD-related laws, only 13 have substantially completed legislation to date: Bolivia, Brazil, Cameroon, Columbia, Costa Rica, Ecuador, Malaysia, Mexico, Nicaragua, Peru, the Philippines, the Republic of Korea and Venezuela (personal communication, Kerry ten Kate, UK Royal Botanic Gardens, Feb. 2002).

Some developing countries have set up interministerial committees to coordinate policy advice. Key participants

Awareness in poor countries about the intellectual property regime still tends to be low among key stakeholders such as the business sector, the scientific community and public officials.

are the ministries of industry, commerce, science, environment (bio-diversity-related issues) and education or culture (for copyright and related rights). A good example of joined-up policymaking on intellectual property and public health is Kenya's Industrial Property Act 2001, with provisions on parallel importing and compulsory licensing designed to allow import of generic anti-HIV drugs. Such committees have been formed only relatively recently (e.g. for implementation of the TRIPS Agreement) and may not yet be fully effective.

An ideal participatory process for intellectual property policymaking might involve preparation of a discussion paper on a particular subject (e.g. protection of traditional knowledge) by local academics, perhaps in collaboration with international experts; its circulation to interested parties; public meetings or workshops of various stakeholders; preparation of draft legislation or a policy paper by the lead government department; and public consultation and review in legal journals or newspapers. Eventually legislation would be given to Ministers for approval and to nationally elected representatives for enactment. The new legislation might then evolve further in practice through judicial interpretation.

The evidence suggests, however, that this may be one of the weakest areas of the intellectual property system. At one end of the spectrum, India had an extensive system of broad public consultation, which included public workshops on controversial topics, such as protection of bio-diversity and traditional knowledge and use of compulsory licensing), and drew on high level expertise in the academic, business and legal communities. Even some civil society groups have intellectual property policy research and advocacy programmes, such as the CUTS Centre for International Trade, Economics & Environment in Jaipur. At the other end of the spectrum, one sub-Saharan African developing country reportedly passed new copyright legislation after a mainly technical drafting process and minimal public consultation or debate, even relative to other law reforms in the past. All available evidence is that countries devised very few mechanisms for participation of poorest groups in policymaking for intellectual property reform.

Few developing countries have legislated to regulate access to biological resources and benefits sharing under the Convention on Biological Diversity (CBD), and even fewer have done so for protecting traditional knowledge.

Finally, recent experience from developing countries that have initiated programmes to modernize intellectual property laws and institutions suggests a lack of

continuity from the development of policy and legislation to its implementation through regulations and organizational procedures in the relevant agencies.

Participation in international rule making and standard setting

International rule making and standard setting on a very broad range of intellectual property subjects takes place predominantly in WIPO and WTO. A large majority of developing countries are members or becoming members of both organisations. Of the 49 LDCs shown in table 3, 30 are members of WTO, with 9 more in the process of accession; 41 are members of WIPO. Five LDCs (Afghanistan, Comoros, Kiribati, Tuvalu and Vanuatu) are not currently members of either WTO or WIPO. For any country, effective participation requires permanent representation in Geneva, appropriately staffed expert delegations able to attend WTO/WIPO meetings, adequate technical support for policy analysis within the lead government departments, and functional mechanisms for policy coordination and discussion in the capital.

Effective permanent representation in Geneva is important for ensuring good information flows back to the capital; participation in informal consultations (like the WTO Green Room meetings) as part of the negotiating process; alliance building with like-minded countries; eligibility for Chairmanship of WTO meetings; and better access to services and assistance available from WTO and WIPO Secretariats. A recent study (Weekes et al, 2001) found that 36 developing countries, members or becoming members of WTO, have no permanent representation in Geneva, essentially because of financial constraints. Twenty LDCs are currently without permanent representation in Geneva.

In their permanent Geneva missions, WTO developing country members have an average of 3.6 staff, compared to 6.7 persons for developed country members, and the estimated minimum requirement is 4 to 5 staff (Michalopoulos, 2001). But this conceals the fact that the average staff per mission is 8+ for ASEAN countries and 5.5 staff for Latin American countries, India and Egypt. Thus the average size of the small poorer country missions is significantly below the overall developing country average of 3.6 staff.

In some developing countries, intellectual property officials may help to develop national positions on various issues and then serve on the national delegation to WIPO, WTO, or regional meetings such as ARIPO. In many poor countries, financial resources are lacking for such travel, notwithstanding the assistance available from WIPO. For example, Jamaica has only been able to send representatives from the capital to three WIPO Governing Body meetings since 1995 due to financial constraints. One sub-Saharan African government was reportedly largely unaware of the draft TRIPS Agreement until a national seminar organized by the WTO Secretariat in

1993. Even when poor countries are represented by officials from the capital in WIPO meetings, this is limited to personnel with mainly technical knowledge of IPR administration, as opposed to a knowledge of intellectual property as a tool of regulatory and economic policy, and they may lack experience in representing national interests in international fora. Even India, with considerable depth of intellectual property expertise and institutional capacity, had difficulty coordinating national policymaking with international rule making in the TRIPS negotiations of the WTO Uruguay Round (Sen, 2001).

In summary, some developing countries, including many of the poorest, are currently little more than spectators in WTO and WIPO, if they are present at all. Other developing countries, perhaps 30-35 in total, including Brazil, Egypt, India and some LDCs like Bangladesh, are reasonably competent participants at WTO and WIPO and, for various reasons, are able to influence their rule-making processes.

Administration

Part II of the TRIPS Agreement sets out minimum standards for the acquisition and maintenance of patents, trademarks, copyright and other forms of IPRs in WTO member countries (numbering 144 as of November 2002). Article 62 of the Agreement requires that national procedures permit the granting or registration of the right within a reasonable period of time. Beyond this general framework, administration of IPRs calls for institutional capacity in terms of organization and management, staffing and human resources, operating procedures, and automation models.

The administration of IPRs involves receiving applications for patents, trademarks, industrial designs, utility models, integrated circuits and plant varieties, their formal examination, granting or registration of the IPRs, publication, and processing of possible oppositions. As IPRs expire after specified periods of time, further steps are required to renew them and document the decision. While all the procedures require properly trained staff and modern automated information systems, by far the most challenging aspect is the examination of patent applications. Some patent applications run to thousands of pages of technical data, in a wide array of technology fields, and substantive examination involves both professional/technical competence and access to sophisticated international patent information computer databases. Such institutional capacity requirements are way beyond the reach of most IPR administration agencies in the developing world (though China, for example, has world class patent examination capabilities). Developing countries can and often do instead opt for a patent registration regime or join a system of regional or international cooperation.

The level of public administration required for copyright and related rights is minimal (Sherwood, 1996). Copyright

can be set when a work is created or expressed, without such formalities as examining for prior art or assessing for inventive step. Some developing countries (e.g. India and Vietnam) have adopted voluntary copyright registration systems, and a larger number of developing countries (e.g. India, Jamaica, Zimbabwe, Kenya, Tanzania, Trinidad and Tobago) have created collective management societies, which represent the rights of artists, authors and performers, and collect royalties from licensing copyrighted works held in their inventories.

While views differ on the merits of establishing collective management societies in developing countries, it would seem imperative that the full costs of establishment and operation of such agencies be borne by copyright holders, the direct beneficiaries, and not become a burden on the scarce public finances available in most poor countries.

The volume of IPR registrations in developing countries vary very widely. For example, in 1998 China handled over 82,000 patent applications and granted 4,700+, while Jamaica received 60 applications and granted 16. These big differences between countries, and even between years, arise because very few applications made under international cooperation treaties enter the national phase where substantive registration takes place; because the country is a member of a regional organization which handles IPR administration, such as ARIPO, OAPI or GCCPO; or because different national laws and regulations are more or less attractive for IPR applicants.

Developing countries have a number of common institutional formats for IPR administration. A 1996 WIPO study (Institute for Economic Research, 1996) surveyed 96 developing countries and found that over two-thirds performed administration of industrial property by a department within a ministry of industry and trade, or a ministry of justice. In 10 countries an independent government agency was responsible. Regarding copyright, a third of the countries performed this by a department in a ministry of education or culture, and by an independent copyright agency in 15 cases. Interestingly, in another third of the developing countries sampled, there was no special unit within the government with responsibility for copyright administration.

A number of developing countries (e.g. Jamaica and Tanzania) have recently established (or are establishing) a single, semi-autonomous intellectual property institution to administer industrial property and copyright. Also notable is the establishment of units for administration of plant variety protection or plant breeders' rights — for example, the Plant Breeders Registration unit in the parastatal Kenya Plant Health Inspectorate Service established in 1997.

There are good arguments for establishing a single, semi-autonomous intellectual property administration office, under a suitable government ministry. Advantages include separation of regu-

latory and administrative functions; improved customer-orientation and services; a more business-oriented approach to cost-recovery and expenditure control; and better policy coordination across different areas of intellectual property. Country evidence shows that lack of financial autonomy contributes to difficulties in staff recruitment and automation investment, and that combining IPR administration with other functions (such as companies registration and small enterprise development services) in a single agency can lead to considerable cross-subsidization of the other functions from IPR user fees and to financial handicapping of the IPR functions.

The number of staff involved in IPR administration in developing countries varies enormously — from one untrained person in the Ministry of Trade and Industry in Eritrea, to over 800 staff across three different government agencies in India. To meet minimum administrative standards required by the TRIPS Agreement, a skeleton office handling very low volumes of IPR applications, such as an LDC like Eritrea, would need perhaps 10–15 professionals and a similar number of administrative/support staff. Agencies in Jamaica, Kenya, Tanzania, and Trinidad and Tobago have 51, 97, 20 and 23 posts respectively, while Vietnam has 236 industrial property staff and 22 copyright staff. Almost all the countries reviewed reported shortages of trained professional staff. An important constraint for recruitment/retention of staff is that public service salaries are invariably well behind those in the private sector.

Automated information systems are a key requirement for efficient administration of IPRs and an important indicator of institutional capacity. IPR administration requires some specialized software, and common software packages have been specifically designed for developing countries by agencies such as the EPO. As for computer hardware, stand-alone personal computers, with CD-ROM and printer units, are adequate for small, poor developing countries and LDCs. Even in a lot of larger developing countries, standard local-area networks linked to a central database will be able to satisfy the needs. Availability of information technology and the Internet also enables easy access to a wealth of information on intellectual property policy subjects, as well as the on-line databases and libraries of organisations like WIPO, WTO and UNCTAD. Yet, 154 intellectual property offices around the world currently lack Internet connectivity (WIPO, 2001b).

Enforcement and regulation of IPRs

IPRs are valuable only if they are well enforced, which implies that the legal system is integrally related to the intellectual property system in a holistic institutional framework. A rating of intellectual property regimes and their attractiveness to investors in 18 developing countries assigned 25 points out of a possible 100 (the largest single points

category) to factors such as judicial independence, prompt injunctions, competence of judges, delays experienced in legal proceedings, and the capacity of police and customs to act in IPR cases (Sherwood, 1997).

The International Chamber of Commerce (ICC) reports very high levels of IPRs infringement in developing countries. For example, the ICC website describes Thailand as the biggest source of pirated compact discs in Asia, capable of producing up to 60 million such products per year. The largest area of the IPR infringement in most poor countries is in copyright (e.g. counterfeiting of computer software and recorded music) and trademarks. For many developing countries, particularly the poorest, the detailed minimum requirements to enforce IPRs which are set out in the TRIPS Agreement (Articles 41- 61) present considerable challenges for policing and judicial systems, civil and criminal procedures and customs authorities. Some developing countries, such as Thailand and Panama, have established specialized courts to hear IPR-related cases as a means of improving their national enforcement capacities, though such a measure is not formally required by the TRIPS Agreement. A more attractive approach for other developing countries is to establish or strengthen a commercial court, as Jamaica did in 2001, to hear IPR-related cases.

The "private" nature of IPRs suggests the importance of resolving disputes between parties out of court or under civil law. Indeed, as state enforcement is resource-intensive, there is a strong case for poor countries' legislation to emphasize enforcement through a civil rather than a criminal justice system, reducing the enforcement burden on the government. Particularly in Asian countries like Vietnam, out-of-court settlement of IPR disagreements has a long tradition and may be the preferred route. Of course, in the case of wilful piracy and counterfeiting on a large scale, state enforcement agencies would still be required to intervene. To the extent that they exist in developing countries, collective management organizations may play an important role in enforcement of IPRs, particularly for copyright infringements.

There are very high levels of IPRs infringement in developing countries, mostly in trademarks and copyright violation by counterfeiting computer software and recorded music.

There are also institutional issues for developing countries in effective regulation of IPRs, particularly regarding matters of special public interest, such as compulsory licensing of pharmaceutical IPRs and preventing and controlling

anti-competitive practice by IPR holders (e.g. by restrictive contractual licensing). These complex matters present a significant challenge for policymakers, administrators and enforcement agencies:

> *"In most developing countries, mechanisms aiming at controlling restrictive business practices or the misuse of intellectual property rights are weak or nonexistent. Similarly, developing countries are generally unprepared or unable to neutralize the impact that price increases resulting from the establishment or reinforcement of intellectual property rights may have on access to protected products, particularly by the low-income population."(Correa, 1999)*

Costs and revenues

The establishment and operation of the intellectual property infrastructure in developing countries involves a range of one-time and recurrent costs. Some may be incurred only by the IPR administration agency, while others — or some portion of them — may also be incurred by enforcement agencies (police, judiciary and customs). A good example is the costs of running dedicated anti-counterfeiting police units (e.g. Malaysia) or specialised IPR courts (e.g. Thailand).

The costs will be far higher in developing countries that operate a national IPR administration agency performing substantive patent examination compared to those countries using a registration system. Costs will also be higher for developing countries that develop patent information systems for use by local companies and universities; conduct public education campaigns; establish voluntary copyright registration schemes; and strengthen their permanent representation in Geneva to cover the intellectual property dossiers in WIPO, WTO and UNCTAD. There are very good reasons for supporting such activities in developing countries, but they are not of course required under the TRIPS Agreement.

UNCTAD (1996) reported some estimates of the institutional costs of compliance with the TRIPS Agreement in developing countries. In Chile, additional fixed costs to upgrade the intellectual property infrastructure were estimated at US$718,000, with annual recurrent costs increasing to US$837,000. In Egypt, the fixed costs were estimated at US$800,000, with additional annual training costs of around US$1 million. Bangladesh anticipates one-time costs of only US$250,000 (drafting legislation) and US$1.1 million in annual costs for judicial work, equipment and enforcement costs, exclusive of training. In 2001, the World Bank estimated that a comprehensive upgrade of the IPR regime in poor countries, including training, could require capital expenditure of US$1.5 to 2 million per country, although evidence from a 1999 survey of relevant World Bank projects suggested these costs could be far higher. India, for example, has committed around US$19 million just to modernize its Patent Office over a five-year period.

In most developing countries, IPR administration agencies charge various service fees. In some larger developing countries, such fee revenues are significant and far exceed the operating expenditures of national IPR administration agencies. In Chile, for example, fee revenues from industrial property rights administration amounted to $6 million in 1995, compared to recurrent expenditure of $1 million in the same period (UNCTAD, 1996).

The key question for the poorer developing countries is to what extent are they able to recover from rights holders the full costs of a modern intellectual property infrastructure? It seems hardly desirable that developing countries should have to take resources from overstretched health and education budgets to subsidize the administration of IPRs, where the overwhelming majority of rights owners will be from industrialized countries. Instead, as the World Bank (2002) notes, "in many poor countries, devoting more resources to the protection of tangible property rights, such as land, could benefit poor people more directly than the protection of intellectual property."

Some poorer countries risk processing very low volumes of IPRs for some time to come. Part of the answer for them obviously lies in rationalizing expenditure on IPR administration through automation and regional or international cooperation. Over time, in some countries such an approach may also help to generate higher volumes of IPR applications and grants for which fees can be charged. A second part of the answer is technical and financial assistance from donors, which is mainly available only for one-time investment costs, rather than recurrent costs.

The remaining option for developing countries is to stage their capital investment programmes (to the extent possible) and ensure that IPR service fees are set at a level where the full costs are recovered. This points to the need for rigorous financial management and accounting systems in IPR administration agencies. A number of developed and developing countries have adopted a tiered system of charges, where reduced fees could be charged to, for example, nonprofit organisations, individuals and small commercial organizations, such as those where the number of employees or level of turnover falls below specified thresholds. This seems a very sensible cost-recovery policy for poor countries to adopt, as it should provide a means of developing the national intellectual property infrastructure and delivering improved services for users, without placing additional burdens on the public finances.

Regional and international cooperation

Given the exponential growth in the volume and complexity of industrial property rights applications worldwide, regional and/or international cooperation in IPR administration, even for

developed countries, is now essential. This would help to ensure high validity of rights, reduce costs and increase efficiency in national IPR administration. For patents in particular, most countries rely to a greater or lesser extent on the work of the EPO and the patent offices of the United States and Japan, which together probably do substantive examination for around 95 per cent of all applications worldwide. The EPO has over 5,000 professional patent examiners specializing in different fields and technologies — significantly more resources for patent administration than national offices around the world

In light of the growing volume and complexity of industrial property rights applications worldwide, regional and/or international cooperation in IPR administration, even for developed countries, is now essential.

It is therefore vitally important that developing countries, particularly the poorest, design their national IPR regimes and institutions to take full advantage of the regional and international cooperation systems available, particularly for determining that patent and trademark applications meet established standards and criteria for protection. A number of alternatives for regional and international cooperation are on offer and are being used by developing countries.

The first option is membership in the Patent Cooperation Treaty (PCT) and Madrid systems. Under PCT, technical search and examination are performed by ten authorities (the EPO and the national patent offices of the United States, Japan, Australia, Austria, Spain, Sweden, Republic of Korea, China and the Russian Federation). This not only allows national patent offices to minimize search, examination and publication tasks; it also allows domestic companies and inventors to obtain high-quality, international patent protection in all PCT member countries at relatively low cost; residents of developing countries get a 75 per cent reduction in all PCT fees. At the time of writing, 115 countries were members of the PCT, with developing countries in the majority, including 23 of the 49 LDCs (WIPO website). Membership of the Madrid system produces similar advantages in trademark administration. At the time of writing, membership of the Madrid system is 70, including only 7 LDCs.

The second option is to delegate or contract out some tasks of IPR administration (essentially patent administration) to another national patent office or to EPO or WIPO. EPO offers an extension system for patents to a number of smaller countries in Eastern Europe and a similar vali-

dation system for patents to developing countries, although currently no country is using it. Under the EPO's validation system, patent applicants can designate the developing countries that opt to join as well as the EPO member countries; the initial fee for this additional designation would be retained by the EPO for its expenses, but subsequent annual renewal fees (up to 20 years) would be transmitted to the developing country concerned. Developing countries can also impose conditions on the granting of rights under the validation system, in line with their own national legislation (e.g. they could exclude patents for pharmaceuticals).

WIPO's Patent Information Services (WPIS) assist developing countries in search and examination of patent applications. From the start of the program in 1975 until July 2001, almost 15,000 search requests were processed free of charge from over 90 developing countries and 14 intergovernmental organizations and countries in transition. The searches are free to those requesting them. For search requests from ARIPO, examination is also carried out.

The third option is membership of a regional industrial property system, where these exist. There are currently four such regional industrial property organizations in the developing world:

- In Eastern Europe and Central Asia, the Eurasian Patent Office has 9 member states, including low-income countries like the Kyrgyz Republic, Tajikistan, Azerbaijan and Armenia.
- In the Arab region, the Gulf Co-operation Council Patent Office (GCCPO) includes 6 member countries (but not Yemen, the only LDC in the region).
- In Africa, there are two regional industrial property organizations: Organisation Africaine de la Propriété Intellectuelle (OAPI), with 16 member states, and African Regional Industrial Property Organisation (ARIPO), with 15. Both play a significant role in the intellectual property administration of a large number of the poorest countries in the world, and both also provide activities related to training, harmonization and patent information dissemination.

There are currently no regional industrial property administration organizations in Latin America, the Caribbean, Pacific, South Asia, or South East Asia. However, the six countries of the Andean Pact have developed common intellectual property legislation, though this is still administered individually by national governments. And there are also ongoing efforts to deepen regional cooperation in the Caribbean for collective management of copyright, and in southeast Asia for a common filing system for trademarks. A majority of the LDCs (27 of 49) are currently not members of regional intellectual property organisations, although 12 of these are within the African region, and so could potentially join OAPI or

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ARIPO, and Yemen could potentially join the GCCPO.

Looking at OAPI and ARIPO in more detail, there are some important differences:

- OAPI is a regional industrial property system of mainly French-speaking countries. It issues patent rights on behalf of, and in the name of, all of its member states (there is no system of country designations). OAPI member countries do not have national industrial property administration systems and their industrial property law is the OAPI system. OAPI is essentially a registering office for IPRs, with around 76 staff (25 of whom are professionals).
- ARIPO is a regional industrial property system of mainly English-speaking countries. It allows the filing of one application for trademarks, patents or designs with effect in all designated Member States. ARIPO member states, however, still have their own national industrial property legislation and administration systems. Membership of the protocols covering the different IPRs is optional (e.g. only 5 countries are currently members of the Banjul protocol on trademarks). ARIPO has 26 staff, 8 of whom are professionals, but has a small examination capacity with 3-4 highly professional examiners.

Largely as a result of these differences, OAPI handles more IPR applications than ARIPO (especially trademarks) because there is no national filing route for its member states. Consequently, OAPI is able to return a portion of revenues to its members (7.5 per cent of its total revenues of 3.8 million euros in 1999), whilst ARIPO is still partly dependent on financial contributions from member states. Both ARIPO and OAPI, however, continue to be long-term recipients of substantial technical assistance from donor agencies, including WIPO, EPO and France's Institut National de la Propriété Industrielle (INPI). OAPI received technical assistance to a total value of 830,000 euros in 1999 alone. Each organization has undertaken significant investment and training programmes in recent years.

Given the institutional challenges and constraints facing many poor countries, the advantages of regional and international cooperation are apparent. The role of regional organizations is principally in IPR administration, which still leaves to national institutions the functions of policymaking, participation in international rule-making, and enforcement of IPRs. Regional organizations, therefore, complement rather than wholly replace national intellectual property infrastructures.

TECHNICAL COOPERATION PROGRAMMES 1996-2001

Under Article 67 of the TRIPS Agreement, developed country WTO Members are formally obligated to provide techni-

cal and financial assistance to developing countries and to facilitate implementation of the TRIPS Agreement. Given the very low levels of IPR creation in poor countries, this assistance is unusual in that a significant share of the resultant direct benefits can be expected to go to foreign IPR holders who are mainly from the developed countries.

In very poor countries, especially LDCs, priority is rightly given to increasing ODA expenditures on basic health and education services for the poorest in order to meet the international development target of halving world poverty by 2015. Therefore, it is appropriate that the financing required for technical assistance aimed at modernizing IPR infrastructure in these countries should normally be raised from service user fees paid by IPR holders. In fact, organizations like WIPO, EPO and the patent offices of some developed countries already adopt this approach to a large extent. For example, out of WIPO total income of 530 million Swiss francs, about 85 per cent is from fee revenues. Additional financing for assistance to LDCs could be relatively easily and equitably generated from fees; if PCT fees alone had remained at the 1976-1977 level, instead of being substantially reduced, that fee income would have been about 60 per cent higher for 2002-2003 (WIPO, 2001b).

Major donors and types of activities

IPR-related technical assistance to developing countries is provided directly or by multilateral agency contributions by most developed countries, including the European Union and its member states, the United States, Japan, Australia, Canada, New Zealand, Norway, and Switzerland. The principal international organizations involved are WIPO, EPO, the World Bank, UNDP and UNCTAD. In staffing, the most significant donor organization are WIPO, with around 60 full-time professional staff working in its Development Cooperation division (including the WIPO Worldwide Academy), and EPO, with about 40 staff in its Directorate for International Technical Cooperation. UNDP and the World Bank, in contrast, have provided mainly financial resources, either directly to developing countries or via contributions to WIPO trust funds. UNCTAD advises some developing countries in accession to WTO on implementation of the TRIPS Agreement and undertakes research on intellectual prop-

Given the institutional challenges and constraints facing many poor countries, the advantages of regional and international cooperation are apparent.

erty and development issues. For example, UNCTAD, in collaboration with the International Centre for Trade and Sustainable Development, is currently providing developing countries with policy guidance on implementation and upcoming reviews of the TRIPS Agreement, through a project financed by the UK Department for International Development. A number of other smaller organisations also provide technical assistance to developing countries or support research on IPR and development related issues.

Donor assistance falls into five broad categories: (a) general and specialized training, e.g. from the WIPO Worldwide Academy; (b) advice and assistance in preparing draft laws; (c) support for modernizing IPR administration offices (including automation) and collective management systems; (d) access to patent information services, including search and examination; (e) exchange of information among lawmakers and judges; and (f) promoting local innovation and creativity (Lehman, 2000b).

More recently, assistance for automation of IPR administration in developing countries and regional intellectual property organisations has become significant. The WIPO Net programme, with projected costs of over 97 million Swiss francs between 2000 and 2005, will provide on-line services such as secure electronic mail, secure exchange of intellectual property data, hosting of national IPR agency websites, and Internet connectivity to 154 intellectual property offices around the world (WIPO, 2001b).

World Bank assistance (e.g. in Brazil, Indonesia, Mexico) has sometimes approached upgrading of national IPR systems as one component of broader policy reform and capacity building aimed at stimulating R&D spending and improving industrial productivity and competitiveness. Such programmes are potential models for better integrating intellectual property reforms and related-capacity building within the broader national development plans and assistance strategies of poor countries.

Scale and coverage of technical assistance programmes

Despite scarce data on technical assistance expenditures across the developing world, some broad indications can be given of the scale and coverage of such programmes undertaken by some of the principal international organizations in recent years. For example, between 1996-2001, WIPO's budgeted expenditure on development cooperation is estimated at 174 million Swiss francs, rising from 45 million in 1996-1997 to 71 million in 2000-2001 (whether including trust funds or not). For the 2002-2003 biennium, that budget is approximately 100 million Swiss francs (including about 20 million from trust funds, but excluding expenditure on WIPO Net). Around 40 per cent of these expenditures are for staff.

For 1990 to 2005, the European Commission has committed over 30 million euros to programmes implemented by the

EPO across the developing world. About 4.5 million euros of this was for programmes in China, and 9.5 million euros was allocated to Eastern European countries. In addition, from its own resources, EPO committed almost 19 million euros between 1996 and 2001, excluding the cost of EPO staff.

Finally, the IPR components of three World Bank-funded programmes undertaken in the 1990s involved US$4 million in Brazil out of a US$160 million loan for a science and technology programme; US$14.7 million in Indonesia within an Infrastructure Development Project; and US$32.1 million in Mexico for improving IPR administration, automation and enforcement.

Effectiveness and impact

Clearly there have been considerable achievements in the last 5–10 years in modernizing intellectual property infrastructure and developing associated human resources in the developing world. Large numbers of people, from a variety of professional backgrounds, have received general and specialized training in intellectual property subjects. Equally, many developing countries have overhauled their intellectual property legislation, taken advantage of international cooperation mechanisms like the PCT and Madrid systems, and increasingly automated IPR administration to improve efficiency and service levels and process more applications for all forms of IPR.

Latin America and Eastern Europe have perhaps achieved the biggest impact, but institutional capacities have significantly developed in countries like China, Morocco, Vietnam, Trinidad, and India, as well as in the regional organizations. At the same time, many low-income countries, and particularly LDCs, still face considerable challenges in developing their intellectual property infrastructure. Also, important issues for the financing, design and delivery of technical cooperation to these countries need be addressed.

First, more finance needs to be brought on stream, raised primarily from IPR holders, for necessary institutional reforms and capacity building in poor countries, as many struggle to implement the TRIPS Agreement over the next few years. This will take time, and some LDCs may well need the extended transition period available to them under the TRIPS Agreement to modernize their IPR systems in a financially sustainable manner. As the World Bank recently said:

> *"While some assistance is on offer now, it is insufficient for the major job of reforming IPR administration. The current approach, whereby grants are made to such organizations as WIPO and UNCTAD for undertaking specific projects, is inadequate given various bureaucratic constraints." (World Bank, 2002)*

Second, design, delivery and coordination of intellectual property-related technical assistance to developing countries can also be improved. In Vietnam,

for example, 8 different donor agencies provided IPR-related assistance between 1996 and 2001). Countries receiving such assistance need better internal coordination to avoid duplication of efforts or, at worst, conflicting advice. More positively, there is much *ad hoc* cooperation between donors and some good instances of more formalized collaboration (e.g. the WIPO-WTO cooperation agreement). Donors should build on these successes.

Finally, to address these new challenges, donors and developing countries need to work together better. They should make better use of existing institutional mechanisms at national, regional and international levels for understanding the IP capacity-building needs of poor countries, sharing project information, and collaborating on sector reviews as a part of continuous elaboration of best practice. The donor community as a whole needs to place more emphasis on monitoring and evaluating the impact and results of IPR-related technical cooperation.

RECOMMENDATIONS

The following 14 recommendations address the issues and problems identified above:

1. Developing countries should establish a single institution for IPR administration, either as a semi-autonomous agency or government department operating on a trading account basis, under the supervision of a suitable government ministry. The institution should also provide policy and legal advice to the government on all IP matters, in conjunction with other concerned ministries and agencies; liaison with enforcement agencies and competition; expert representation in international organizations and rule-making; and co-ordination of IPR public awareness and consultation programmes.

2. Developing countries should ensure that their legislation and procedures emphasize, to the maximum possible extent, enforcement of IPRs through administrative action and through the civil rather than criminal justice system. Rights-holder organizations should be responsible for enforcement of copyright infringement, increase cooperation with the enforcement agencies, and agree with national governments on appropriate cost-recovery mechanisms for any large-scale anti-counterfeiting operations and public awareness campaigns by government agencies.

3. Developing countries should aim to recover the full costs of upgrading and maintaining the national intellectual property infrastructure through national IPR registration and administration charges. A tiered system of fees should be employed. IPR administration agencies should generally only offset one-time and recurrent expenditures with revenues from such charges, but a fixed percentage of revenue income should be returned to the government's consolidated fund each year as a contribution

towards IPR enforcement costs.

4. Developing countries should seek maximum possible benefits in cost reduction and administrative efficiency from existing regional and international cooperation mechanisms such as the PCT and Madrid systems. LDCs and small developing countries in particular should adopt a patent registration regime and make use of verification systems offered by international search and examination authorities such as the EPO. Countries in the African region, particularly the LDCs, should seriously consider becoming full member states of ARIPO or OAPI.

5. Like-minded countries and donors should redouble their support for high-level dialogue on new regional and international cooperation initiatives in IPR administration, training and statistical data collection involving developing countries.

6. Developing countries should encourage policy research and analysis on IP subjects in the national interest (e.g. protection of plant varieties; traditional knowledge and folklore; technology transfer, etc.) within academic organizations, policy think-tanks and other stakeholder organizations in civil society. To assist these efforts, a Preparatory Group of donors and developing countries should be formed to examine the feasibility of establishing a Foundation for Intellectual Property and Development Research, either as a new entity or under an existing nongovernmental organization based in Geneva.

7. Technical and financial assistance to IPR institutions in low-income countries should be through multi-year, broad-based programmes. It should support one-time expenditure, setting financial sustainability of the institution as a key objective from the outset.

8. To meet the special needs of LDCs, WIPO, EPO and developed countries should plan to commit US$100 million in technical and financial assistance specifically to LDCs over the next 5 years, raised though income from IPR service user-fees and fully incorporated within the Integrated Framework for Trade-related Technical Assistance to LDCs.

9. WIPO and EPO should be invited to join the Integrated Framework alongside the World Bank, UNDP, UNCTAD, WTO, and ITC. Developed countries should consider increasing the contribution of their national IPR offices. EPO, WIPO and developed country IPR offices should each contribute US$1.5 million to the Integrated Framework Trust Fund to enable consideration of IPR-related capacity building needs in those pilot country diagnostic studies.

10. To streamline donor coordination, UNDP, the World Bank and UNCTAD should cooperate with EPO, WIPO and developed country agencies in implementing intellectual-property related programmes under the Integrated Framework. To facilitate effective management between the agencies and national governments on the ground in LDCs, a portion of the WIPO and EPO

contributions to the Integrated Framework Trust Fund should be used to fund the provision of up to 6 Field Managers, based in selected UNDP or World Bank offices in Africa (4), Asia (1) and the Pacific (1).

11. WIPO should make funds available to cover the travel, accommodation and subsistence expenses of two representatives from all LDCs to participate in WTO TRIPS Council meetings and WIPO meetings. WIPO should contribute technical and financial aid to initiatives for developing countries without permanent representation in Geneva (e.g. AITEC).

12. To improve monitoring of technical cooperation under Article 67 of the TRIPS Agreement, developed countries and the relevant international organisations should include summary financial information and evaluation results in their annual submissions to the WTO TRIPS council.

13. WIPO should strengthen the monitoring and evaluation of its development cooperation programmes, including a rolling programme of external impact-evaluations, and consider ways of improving the strategic oversight exercised by WIPO's Permanent Committee on Development Cooperation.

14. The OECD Development Assistance Committee should develop Guidelines for Modernizing Intellectual Property Systems for Development, based on case studies on developing countries and regions.

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IN THE NEWS

Current Issues in Intellectual Property Rights

News and controversy continue to be generated by the issues surrounding intellectual property. Pressure groups are active on both sides of the equation: seeking more protection for the rights of inventors and producers, and pushing for improved access to the benefits of innovations in such fields as pharmaceuticals, software, and biotechnology. This is evident in the sampling of news reports from the second half of 2002 given below.

DIVERSION OF DISCOUNTED AIDS DRUGS

A British pharmaceutical company produced a low-cost AIDS drug destined for poor and dying patients in five African countries. However, one-fifth of these products were obtained by profiteers at the marked-down price and shipped back to Europe for sale at market prices with huge profits. The company, GlaxoSmithKline, says it lost almost $16 million in sales last year because of such reselling. One of its drugs sells for $4 to $6 a pill in Europe, but for only 80 cents in sub-Saharan Africa.

A German businessman and a French drug trader were arrested in October for their roles in the diversion. Police and investigators in Belgium, France, Germany and the Netherlands, as well as in Europol, the European police agency, believe there is a wide network of traffic in gray-market AIDS drugs. Suggested ways to track and stop South-North diversions include use of different colors, labels or pill forms (capsules and tablets) in the two markets.

Pressured by AIDS activities and health authorities in developing countries, some drug companies — including Merck, Bristol-Myers Squibb, Roche, and GlaxoSmithKline — have discounted their AIDS drugs by as much as 90 per cent for developing world markets. Others resist such discounting on the grounds that two-price tiers open the door to fraud and undermine the profit margins that make it possible to reinvest in additional R&D for essential new drugs. (See also articles on "Balancing Health Needs" and "Pricing Medicines" in this issue.)

UN GLOBAL DISEASE FUND ENCOURAGES USE OF GENERIC DRUGS

Buying cheaper generic drugs rather than costly brand-name ones is now the policy of the UN disease fund created in 2001. The Global Fund for Fighting AIDS, Tuberculosis and Malaria has a target of $7 billion to 10 billion per year for its work, has so far been given pledges for $2.1 billion, and has received requests from developing countries for $8 billion worth of assistance.

The Fund's recent decision will encourage manufacturers of generic drugs in Brazil, India and other countries to sell more in developing countries, in place of medications from patent-holders in the North. It may also prompt more price reductions by Northern manufacturers, as has already happened with some drugs for treating HIV-AIDS. In addition, the Fund's money will go further now that it can buy less expensive generic drugs and expand treatment to additional patients. Perhaps the clearest example of unmet needs is that only 30,000 of the estimated 30 million people with the AIDS virus in Africa are getting anti-retroviral drugs that are regularly applied in Europe and the U.S.

The Fund's policy is that countries it assists are required to buy the lowest-price drugs, use only drugs with guaranteed quality, and follow international and national laws.

FASTER MARKETING OF GENERIC DRUGS IN THE US

The US government has taken steps to allow cheaper generic drugs to reach the market sooner and to end delaying tactics by pharmaceutical companies that try to extend their monopolies for similar patented drugs. The US Food and Drug Administration estimated that its new rules would save consumers $35 billion over 10 years, out of $4.7 trillion in expenditures for prescription drugs. This will be of most help to older Americans who tend to have fixed or lower incomes and need more medications than younger people — analogous to the less-advantaged populations in developing countries who can benefit from

internationally marketed generic drugs.

A 1984 U.S. law gave brand-name drug manufacturers patent protection and research incentives while also encouraging generic companies to sell low-cost copies of those medicines as soon as the patents expired. Under the new rules, brand-name drug makers would no longer be able to get long extensions of their 20-year patent monopolies by entering multiple lawsuits, obtaining patents on secondary elements like packaging, and raising other obstacles. A patent-holding company would be limited to only one 30-month stay against a generic competitor while a court resolves a claim of patent infringement.

MORE FLEXIBLE INTERNATIONAL RULES FOR INTELLECTUAL PROTECTION

A recent report has recommended a more flexible timetable for developing countries to adopt the rules of the Trade-related Intellectual Property Rights (TRIPS) agreement more at their own pace. Keeping to the present schedule, the TRIPS agreement in full effect would greatly increase the annual patent and royalty income of developed countries, but increase the costs to be paid by many developing countries. For example, according to World Bank estimates, annual gains would be $19 billion for American companies, $6.8 billion for Germany, and $5.7 billion for Japan, while net payments would go up by $5.1 billion a year in China, $2.6 billion in Mexico, and $900 million in India.

Issued by the Commission on Intellectual Property Rights (CIPR) sponsored by the United Kingdom, the report suggests other changes in TRIPS rules, such as allowing developing countries to:

- make greater use of compulsory licensing of drugs;
- copy software by making educated assumptions about the underlying codes, a process called "reverse engineering";
- "crack" software used to protect copyrighted digital media when a country determines that the protective technology limits the fair use of digital materials.

Part of the rationale for these recommendations was provided by Professor John H. Barton from Stanford University Law School, who led CIPR: "If we cut off imitation strategies for developing countries, we are drastically narrowing the options they have to reach an economic takeoff," he said (*New York Times*, October 14, 2002).

The situation of developing countries is similar to that of the United States in the 19th century, when American law offered no copyright protection to authors from other countries. Books from England, for example, were widely copied in America and sold at cut rates in the U.S. Finally in 1891, when a U.S. book industry had grown up and wanted protection abroad, the U.S. gave copy-

right protection for foreign authors in the U.S. when American authors received similar treatment overseas. Likewise in the 20th century, the economies of Japan, Taiwan and South Korea took off under weak systems of intellectual property protection, achieving easy and inexpensive technology transfer, until local industry developed and needed reciprocal international protection. According to the CIPR report, the opportunities for a jump-start in developing countries using imitative tactics is endangered by the scope, speed and strength of the global TRIPS agreement.

From North-South to South-South

THE TRUE FACE OF GLOBAL COMPETITION*

BY ROBERT J. S. ROSS AND ANITA CHAN

"The globalization of capital has made the world smaller and safer for investors; now the question before the world community is whether it can do the same for workers." The challenge is for leaders in the South to agree on a social clause in World Trade Organization agreements that will stop "a race to the bottom" in wages and labor conditions among developing countries working to attract foreign investment. Documenting that race and its impact are authors Robert J. S. Ross, Professor of Sociology and Director of the International Studies Stream at Clark University, in Worcester, Massachusetts; and Anita Chan, Senior Research Fellow at the China and Korea Centre of Australian National University.

AS PROTESTERS BATTLED the police in the streets of Seattle in 1999, calling on the World Trade Organization (WTO) to include environmental and labor issues in its trade negotiations, government representatives in conference rooms were carrying on a battle of another sort. Many developing nations, particularly the Asian countries, were strongly resisting a U.S.-led proposal by developed countries to link trade to environmental and labor standards through a new "social clause" in WTO agreements. The clause, its opponents argued, was a protectionist ploy that rich nations would use to shelter their own workers' jobs from the competition in developing countries. This stance reflected a commonly held perception that the main competition in the production of goods is between the North and the South. But in truth, this competition — particularly in

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labor-intensive commodities — is not so much North versus South, but South versus South. The absence of a mechanism establishing international labor standards is propelling the economies of the South in a race to the bottom in wages and labor conditions.

The social clause, in brief, refers to the proposed insertion of five core labor standards into trade agreements: freedom of association, freedom to organize and to bargain collectively, and freedom from forced labor, child labor, and job discrimination. Many poorer countries either lack the laws to protect these rights, which are enshrined in the conventions of the International Labor Organization (ILO), or they simply do not bother to enforce those laws in their export industries.

TRADE UNIONS DIVIDED

Governments do not necessarily reflect the interests of their country's workers, but labor unions are supposed to. So how do unions line up on the social-clause question? Although the issue at Seattle had united the government leaders of the South in opposition, the international trade-union movement holds diverse views. The International Confederation of Free Trade Unions, composed of 221 affiliated unions that represent 150 million workers in 148 countries, supports the social clause. But African backing for the clause has not always been uniform: trade unions in some countries, such as South Africa, are in favor, whereas those in others, such as Zimbabwe and Zambia, are opposed.

In Latin America, unions are more amenable to linking trade and labor rights, thanks in part to their strong relationships with their North American counterparts. Struggling unions in Guatemala, Honduras, El Salvador, and Nicaragua have strategically used the U.S. threat of trade sanctions (specifically, in response to violations of labor rights) to secure their own rights to organize. For example, Guatemalan workers formed an unrecognized union at a factory owned by the U.S. clothing giant Phillips-Van Heusen in the early 1990s. In a long and bitter campaign, their North American allies — including UNITE, the U.S. apparel-workers union — filed a lawsuit in the United States at their behest, alleging that Guatemala was ineligible for trade concessions because it denied workers the right to organize. This pressure finally led the firm and the Guatemalan government to recognize the union.

Other Latin American confederations of unions — for example, those in Argentina and Chile — support a social clause, too. The trade unions of several middle-income countries in Asia also approve. The Korean Confederation of Trade Unions believes the "social clause can be a significant and effective instrument to protect and achieve social rights and the basic trade union rights." Likewise, the Malaysian Trade Union Congress supports a linkage between

labor standards and trade and exports — out of fear that its members' rights could be undermined by competition from the large number of Asian migrant workers working without labor protection in Malaysia's export zones.

But India's trade unions and China's quasi-governmental trade union federation take a different approach. The governments and trade unions of the two most populous countries in the world are determinedly against a social clause. And because of their dominant weight in the world's cheap-labor market, their positions have enormous repercussions on the wages of unskilled laborers throughout the underdeveloped world. This dominance may also explain the perception that the South is staunchly opposed to the social clause — even though the truth is more variegated.

The debate over a WTO social clause has reached an impasse. Accordingly, there is no internationally binding enforcement mechanism to protect workers' rights in the South.

NECK AND NECK

In rejecting a regulated international labor regime, countries of the South lower their own labor standards to remain competitive and provide a "good" investment climate. This imperative gives businesses an excellent opportunity to exploit their work forces to the fullest; examples include the South Korean, Taiwanese, and Hong Kong firms that subcontract from brand-name corporations to do labor-intensive manufacturing in poor countries. The apparel industry aptly illustrates this type of globalized production. The work is highly labor-intensive, and the industry continues to use a vast amount of unskilled labor supplied by the South, despite technological upgrading. This sector is also among the most footloose: production facilities can be moved easily from city to city or country to country. Apparel manufacturing employs a large number of workers in the South, mostly young women; in turn, this high volume of jobs affects the overall wage levels and labor standards of these countries.

Over the past four decades, the U.S. apparel industry has been overwhelmed by this global low-wage competition. Apparel imports rose from about 2 percent of U.S. domestic consumption in the early 1960s to more than 60 percent in the 1990S. In the largest categories of clothing imports — men's and women's tops — the $26 billion of imports furnishes more than 70 percent of the market by value and about 90 percent by quantity. Since 1980, imports have cut U.S. apparel-industry employment by

half, a loss of more than 600,000 jobs. Many of the workers who remain in the U.S. garment industry, toiling as sweatshop workers or as underpaid home workers, suffer declining wages that today are often below the legal minimum. Even so, the North-South competition is basically over in this industry. The enormous difference in North-South wage levels ensures that those jobs lost will not return to the United States.

A TALE OF TWO COUNTRIES

In recent years, China and Mexico have become the lions of the U.S. clothing market, obtaining an equal market share since the 1993 signing of the North American Free Trade Agreement (NAFTA). By 2000, Mexico and China each supplied around 15 percent of all apparel imports to the United States. (The Chinese total includes Hong Kong's apparel manufacturing, which has relocated almost entirely to the mainland.) But Mexico enjoys two substantial advantages over China: close geography (hence a faster filling of orders) and the absence of quota restrictions, thanks to NAFTA. As a result, Asian investors — particularly South Koreans and Taiwanese — became increasingly active there in the 1990s, even moving apparel production out of Asia into Mexico.

The dramatic growth of apparel exports from Mexico and China to North America has created a surge of new jobs. In both countries, the export-oriented factories employ migrant workers from poor, rural areas. In China, the growth first began in the mid-1980s, in Guangdong province (which neighbors Hong Kong), and picked up speed in the early 1990s. The entire Pearl River Delta in Guangdong, which 20 years ago was largely agricultural, is now a manufacturing powerhouse that churns out labor-intensive goods for the world market. Today, some 12 million migrant workers from poor parts of China's countryside staff these factories' production lines. A similar phenomenon emerged in Mexico in the 1990s. Along the U.S.-Mexican border, new investment created boomtowns where *maquiladoras* (assembly plants) have mushroomed. By 2000, these factories employed about one million workers — an increase of 150 percent since 1990 — and production was spreading to other parts of the country.

Contrary to general wisdom, however, more jobs have not meant higher wages or rising labor standards for migrant workers, whether in Mexico or in China. On the contrary, wages have fallen as a result of intensified competition to attract factories that sell to the North's markets. This drop is reflected in both the low legal minimum wages set by the two countries and the real purchasing power of workers.

In China, the setting of a minimum wage is extremely decentralized. Any city, or even a city district, can set its own minimum wage based on a formula provided by Beijing. This formula takes into

account such factors as the local cost of living, the prevailing wage, and the rate of inflation, and it is adjusted each year. In 2001, for example, the city of Shenzhen (just north of Hong Kong) had two standards. Inner Shenzhen, the city's commercialized sector, had the highest minimum wage in China at the equivalent of $72 per month, but the outer industrialized sector's minimum wage was only $55 per month. Elsewhere in China, legal minimum wages have been set even lower. Although these local governments comply on paper with Beijing's decrees on minimum wages, they attempt to attract investors by allowing them to pay workers below those rates. The legal minimum wage is set by the month and does not take into account that many migrant workers labor illegally for longer hours. (For example, our survey of China's footwear industry shows that the average number of hours worked each day is 11, and laborers often have no days off.) Furthermore, official statistics do not take into consideration the staggering amount of unpaid back wages. Some 40 percent of the 20,000 workers' complaints lodged with the Shenzhen authorities over nine months in 2001 were related to owed wages. Such abuse has become normal in southern China.

Official minimum wages also obscure other critical facts. They do not show the violence and physical abuses that have become pervasive in the factories in China owned by Taiwanese, Korean, and Hong Kong intermediaries; nor do they take into account the acute and chronic occupational health and safety hazards. These factories record a startlingly high incidence of severed limbs and fingers; Shenzhen alone certified more than 10,000 such accidents in 1999 among a migrant population of 4 million. In short, despite China's dramatic export growth, the benefits have not trickled down to the assembly-line workers who make the exported goods. Indeed, their situation has gotten even worse since the Asian financial crisis of 1997-98; the downturn intensified competition with Southeast Asian labor, which had become much cheaper in the wake of local currency devaluations. (Provincial surveys in China show that a downturn in migrant workers' pay started at that time.)

By rejecting a regulated international labor regime and seeking to provide a "good" investment climate, countries of the South lower their own labor standards to remain competitive, which gives businesses an excellent opportunity to exploit their work forces to the fullest.

China's main challenge in apparel and other sectors, however, comes from Mexico. There, workers' conditions in the

BOX 1: FACTORY JOBS MOVING FROM MEXICO TO CHINA

In 2001, plants that assemble duty-free components for export from Mexico, called "maquiladoras", sold $77 billion worth of goods abroad, mostly to the next-door US market. This represented half of Mexico's total exports. However, since then, the industry is beginning to lose out to exporters in other developing countries, particularly China. Over only 18 months between October 2000 and March 2002, these Mexican plants lost 287,000 jobs — a 21 per cent drop. The electronics industry suffered the most, with production shrinking 8.8 per cent in 2001. For example, the Dutch firm Royal Philips Electronics moved production of personal computer monitors from Ciudad Juarez, Mexico, to an existing factory in Suzhou, China.

Why is the Mexico-to-China shift happening? Among the contrasts are that China reportedly fares better in terms of lower employee turnover, lower labor costs, well trained engineers and managers, rising productivity, local suppliers, tax breaks, port and transport infrastructure. Mexican business leaders partly blame China's investment subsidies which they say violate rules of the World Trade Organization, but China's President told the Asia Pacific Economic Conference (APEC) in October, hosted by Mexico, that such obstacles are being removed.

For the US market, Mexico retains a cross-border advantage in heavy and bulky products that would incur major shipping costs if coming from Asian sources, such as automobiles, whose export accounts for nearly 15 per cent of Mexico's gross domestic product. In the light of South-South competition which is emerging, experts suggest Mexico should work to provide more just-in-time delivery to US factories and retailers, promote research and development to create tailor-made products, and invest much more in higher education of engineers and managers.

maquiladoras are also grim. But unlike in China, wage levels in Mexico are more regulated. Only three minimum-wage levels exist for the entire country, including one for the U.S.-Mexico border region (equivalent to $93 to $108 per month). These minimum wages, although low, are almost double those of Shenzhen, which are the highest in China. But Mexico's legal minimum wages fell by almost half during the 1990s, due in part to the peso's collapse in 1996. In addition, competition with countries such as China created a downward pressure on average real wages in Mexico. In the manufacturing sector, wages dropped in real purchasing power terms by 20 percent over the same period. And in the booming apparel sector, ILO data show that their wages shed 14 percent of their purchasing power from 1990 to 2000. Since 2000, wages have gained slightly, but that increase is threatened by the prospect of capital flight to regions with even lower labor costs.

In short, export workers in China and Mexico have not benefited from the eco-

nomic boom. More workers are being employed, but over the course of the 1990s working conditions and wages deteriorated. These assembly workers are caught in an internationally competitive race to the bottom.

INTENSIFYING COMPETITION

In 2005, trade barriers on apparel are due to end under the 1975 Multi-Fiber Agreement (and its 1994 successor). Assuming that its wages remain low, China will then be poised to make more inroads into rich-country apparel markets, offsetting Mexico's advantage of proximity to the U.S. market. In other industries, the WTO's lowering of trade barriers will also tip the scales away from Mexico and toward China. Fearing this, Mexico sought to delay China's entry into the WTO; in fact, it was the last WTO member to sign last year the necessary bilateral agreement with China that paved the way for WTO accession.

Mexico is already feeling the increased competitive heat. Knowing that trade barriers will soon fall, intermediate firms have begun shifting their Mexican assembly lines back to Asia, particularly China. The number of maquiladoras swelled from 120 in the 1970s to 3,700 in 2000, but has dropped by 500 since then. Pressures are increasing on other Mexican factories to compete with China's long working hours and bargain-basement wages. These pressures may also threaten the incremental growth of an autonomous Mexican trade-union movement — a result of years of painstaking political and social change, supported by a solidarity movement in the United States and Canada. Employers who resist relocating to China or to other low-wage countries will be tempted to lower standards in Mexico by resisting the fledgling union movement.

Without regulations to protect labor, akin to rules that protect investors, poor-country workers will not share in the benefits of a growth in world trade. For that reason, labor standards ought to be as much a South-South issue as a North-South one.

Mexican President Vicente Fox has proposed the "Puebla to Panama Plan," which would build an investment corridor for more maquiladoras from southern Mexico through Central America — at wages even lower than those at the U.S.Mexican border. In China, meanwhile, the government is encouraging foreign investors to go north and inland in pursuit of lower costs than can be found in southern China.

The examples of China and Mexico show just how much the international competition among nations of the South influences their workers' well-being. And

this race to the bottom affects people elsewhere in the developing world who hold jobs in those sectors. Without regulations to protect labor, akin to rules that protect investors, poor-country workers will not share in the benefits of a growth in world trade. For that reason, labor standards ought to be as much a South-South issue as a North-South one.

MAKING STANDARDS STICK

The debate over a WTO social clause has reached an impasse. Accordingly, there is no internationally binding enforcement mechanism to protect workers' rights in the South. Even the ILO, charged with this responsibility, has no means to enforce compliance with its conventions. It is doubtful that the Global Compact initiated in 1999 by UN Secretary-General Kofi Annan, which draws up guidelines for good corporate practices in the areas of human rights, labor rights, and the environment, will be useful, because it too lacks an enforcement mechanism. No competent global forum can enforce a verdict when a nation or its enterprises contravene fundamental labor rights.

Governments and trade unions of the South must confront this challenge. Their campaign against the North's protectionism has done little to improve the lot of their own work forces in export industries. They have to face the fact that they are competing among themselves — and that they themselves are partially responsible for the decline in wages and labor standards. The growing crisis in back wages (and wages simply never paid) owed to Chinese migrant workers shows that the bottom is continuing to fall. China is a key player in the South-South competition, and unless other countries can convince China to form or join a Southern consensus to put an international floor beneath wages, the scenario will only worsen. Only through enforceable minimum-wage standards can these countries prevent Northern corporations and intermediate suppliers from playing them off against each other. The possibility of WTO trade sanctions would deter abuses and give incentives to national labor-law enforcement. It would give all nations the right to complain about violations in an international forum. Picking up where President Bill Clinton and other developed-country leaders left off in Seattle, the WTO should devise a regulatory regime in line with a labor "social clause," so that violators, both governments and corporations, can be sanctioned if they contravene it. This scheme or something similar to it will be necessary before labor standards can be expected to improve or even just stabilize. The globalization of capital has made the world smaller and safer for investors; now the question before the world community is whether it can do the same for workers.

Costa Rica's Technology Strategy

ROOTS AND OUTCOMES

BY ANDRÉS RODRÍGUEZ-CLARE

Electronics and medical services are growing sectors in Costa Rica, which now has the most software exports per capita in Latin America. The country's transformation into a knowledge-driven economy is led by high-tech transnational and domestic companies and by well-crafted government policies, but also has deep roots in national educational and political systems. In this article Andrés Rodríguez-Clare discusses how these developments came about and what other countries can learn from the experience. He is Visiting Lecturer in Public Policy at Harvard University's John F. Kennedy School of Government, and headed the Council of Presidential Advisors in Costa Rica, 1998–2002.*

ARRIVING AT A STRATEGY

Over the last decade Costa Rica has made a tremendous leap forward in the development of a technology and knowledge-driven economy. Perhaps the better known part of the story is that an important group of high-tech transnationals decided to establish manufacturing plants in the country. This group includes not only Intel and several other companies in the electronics sector (e.g., Remec, Sawtek, Conair, Reliability, Protek, Sensortronics, Colorplast), but also several companies in the medical devices sector, such as Abbott and Baxter. The country also appears to be benefiting from the information-technology-led restructuring of large corporations, with the establishment of Procter and Gamble's Global Business Center in the country (the largest GBC in the world), as well as other service centers such as Western Union and IT technical support provider Sykes.

The growing importance of knowl-

* This is an edited version of a paper written for UNDP's 2001 *Human Development Report*.

edge and technology in the economy does not end with high-tech transnationals. It reaches deeper into the economy, as evidenced by several domestic companies that are successfully competing worldwide in knowledge-intensive sectors. The clearest example is the phenomenal growth of the domestic software sector, so that today Costa Rica has the highest level of software exports per capita in Latin America. Two very significant signals of the country's potential in software and design come from recent decisions by Intel. First, it decided to go beyond the assembly and testing plant it established in 1998, and establish in Costa Rica a center to develop software for the company and contribute to its semiconductor design processes. Second, through its venture capital fund, it invested in one of the most promising software companies in the country. All this goes together and is reinforced by the existence in the country of internationally recognized centers of high quality training, education and research, such as Harvard-associated INCAE, Earth, CATIE, and INBio.

Costa Rica has made a tremendous leap forward in the development of a technology and knowledge-driven economy.

At the outset it should be emphasized that the positive technological developments experienced by Costa Rica in the last years are not the result of any collective and explicit decision. They are not the product of some charismatic leader who convinced the country to move in a particular direction. No specific legislation or "grand national vision" is responsible. Moreover, there are important disagreements within the country about the measures, reforms and adjustments that have to be made for Costa Rica to be successful in this new stage of development. There are profound divergences about, for instance, the role of the state and the private sector in the delivery of public services, most notably telecommunications. And this should be no surprise. One cannot expect an open and pluralistic democracy like Costa Rica to achieve the kind of long-term and unified national vision that was found in countries like Japan, Taiwan and Singapore.

Costa Rica's recent string of achievements in the technological area are the result of a series of mutually reinforcing policies and events (some of them dating back to the 19th century) that have converged in the last years. What is important, however, is that there is no significant opposition to a development strategy based on technology and human capital, with high-tech transnationals playing a key role. This is perhaps because there is no clear alternative to this strategy; or perhaps because the momentum accumulated in recent years behind these

developments seems unstoppable. This momentum becomes evident when one sees several different institutions — from the national agency in charge of attracting foreign investment to the public universities, from the ministry of education to the national institution in charge of telecommunications — all moving ahead with programs and projects that in complementary ways support the transition of the economy towards the new knowledge-intensive stage.

THE ROLE OF HISTORY

The process for arriving at Costa Rica's current "national strategy"even goes back to the first half of the 19th century, with the strong emphasis on the importance of education for democracy and development. At the beginning of the 20th century Costa Rica's literacy rate was among the highest in the Americas. This commitment to education was later reinforced with the creation of the first public university of the 20th century in 1940, followed by the creation of three more public universities in the 1970s. The public universities generated the supply of scientists and engineers needed for the industrial sectors that grew in the 1960s and 1970s under the import substitution model, and also for the state-owned companies and institutions in telecommunications, electricity, agriculture, industry, water supply, and infrastructure.

In terms of education, the 1980s were worse than a "lost decade" for Costa Rica. High-school enrollment rates fell significantly, only to recover to 1980 levels by the end of the 1990s. One 1980s initiative — the installation of computer labs in schools — later contributed significantly to the country's prospects for developing a technology- and knowledge-driven economy. Later recognized around the world for two revolutionary characteristics, the program concentrated on elementary schools, so that it could make a deeper impact on students; and it did not focus on teaching computer skills, but rather used the computer as a tool to aid in the general learning process. Two other developments during the 1970s and 1980s that would also prove important for the new economy were the growth of private universities and the creation of technical or vocational high schools and public junior colleges. Without the investment in education that took place for almost two centuries, the current prospects for growth based on human capital would of course be impossible.

The momentum of recent years seems unstoppable, with complementary programs of several institutions supporting the economy's transition towards a new knowledge-intensive stage.

After the crisis of the early 1980s, Costa Rica had to abandon the import substitution model, and moved to an export promotion model. This was based primarily on trade liberalization (and access to the US market through the Caribbean Basin Initiative) and two systems of fiscal incentives: the Export Processing Zone regime and the Export Contract.

The Export Processing Zone regime allowed companies to import all their inputs and equipment tax free and avoid paying income tax for eight years, paying only 50 per cent of taxes due for the next four years. This system was designed to attract foreign direct investment (FDI) and eventually became a key element in attracting high-tech transnationals. A study by FIAS (Foreign Investment Advisory Service, a joint service of the International Finance Corporation and the World Bank) concluded that Costa Rica's "free trade zone legislation has resulted in one of the better export-processing zone systems in the developing world" (FIAS, 1996: vi).

Through the Export Contract, companies not only enjoyed an income-tax holiday and tax-free imports of equipment and inputs, but also received a generous subsidy equivalent to 10 per cent of the value of their exports. This system was designed to help domestic companies change their orientation from the domestic and Central American Common Market towards competing in open and competitive world markets. A parallel objective was to diversify the country's agricultural exports from heavy dependence on coffee and bananas. The subsidy was also justified as a way to compensate exporters for inefficiencies in public services such as electricity, telecommunications, and ports, as well as the high costs of financial services like insurance and banking caused by the quasi-monopolistic structures that remained in those sectors.

The strategy of trade liberalization, export promotion and attraction of FDI paid off, and the country attained moderate rates of growth in the second half of the 1980s and early 1990s. It soon became evident, however, that the system placed a heavy burden on the fiscal system. Public debate during the 1990s revolved around incentives, trade liberalization, and structural reform. The private sector argued that incentives and some degree of protection to local industry were necessary to compensate for inefficiencies and distortions that existed mainly in the financial sector and public services. Economists and some policy makers argued that both incentives and distortions had to be eliminated simultaneously through structural reform. This

Costa Rica's free trade zone legislation has resulted in one of the better export processing zone systems in the developing world.

process was very difficult and frustratingly slow because of strong opposition from public sector unions and the difficulty of passing reform bills through congress (where the governing party lacked a strong majority and congressional procedures encouraged filibuster practices).

During these years of debates about structural reform, political candidates and governments talked about policies and programs to support science and technology, but there was little substance and little funding, leading to small programs that generally had little impact on the economy. So neither the big debate in the political arena nor the public policies related to science and technology did much to determine the new vision. What really made the difference was happening elsewhere, behind the doors of CINDE.

THE CINDE STORY

The transition to the new export promotion model was accompanied and supported from the beginning by the Costa Rican Investment Board (CINDE). A private nonprofit organization, CINDE was founded in 1983 by prominent business people, supported by the Costa Rican government and financed by grants from the US-AID. Its broad objective was to help in the development of the economy, but the attraction of FDI was always one of its top priorities. It assists foreign investors in establishing operations in Costa Rica.

Through time, it gained very relevant expertise in promoting the country abroad and attracting FDI, mainly for agriculture and manufacturing sectors that are unskilled-labor-intensive, especially clothing assembly plants (maquiladoras). Its success was in large part due to its institutional nature (nonpolitical, nongovernmental), which allowed it to have continuous programs and a long-term strategy without being affected by periodic changes in government.

In the early 1990s CINDE realized that the country was losing competitiveness in unskilled-labor-intensive industries to other members of the CBI and also due to the North American Free Trade Agreement (NAFTA), which would give Mexico better access to the US market than CBI members. At the same time, it was losing the US-AID funding it had enjoyed from its creation. It therefore decided to focus FDI attraction efforts on skilled-labor-intensive industries, in a few sectors that better matched Costa Rica's relatively high education levels.

For its 1993 strategic plan, CINDE focused on electrical, electronic and telecommunication industries. These not only required higher skilled labor, but were also experiencing fast growth in the US, and strong competitive pressures were forcing companies to search for low-cost locations around the world. These sectors seemed a particularly good match for Costa Rica because of its good supply of technicians and engineers at relatively low cost, the widespread knowledge of English, and the country's well known political sta-

bility, democracy, developed legal system (i.e., rule of law), and low levels of corruption. Moreover, there was a high quality of life, with good access to health services, nightlife and cultural amenities, natural resources and ecotourism (for which the country was increasingly better known). In fact, several companies in the electronics sector were already established in the country, among them Motorola, Trimpot, Sylvania, and Espion.

The year 1995 confirmed that this strategy was right. DSC Communications Corporation decided to establish a manufacturing plant in Costa Rica — the largest industrial investment in the country up to then and the first Printed Circuits Board (PCB) assembly plant in the country. Sawtek Inc., Merrimac Industries, and Remec also chose to invest in the country. Thanks to these successes, CINDE acquired a deeper understanding of the industry. It realized for the first time that, though Costa Rica had a unique competitive advantage for these sectors over other CBI members (Mexico, El Salvador, the Dominican Republic), it was now competing against countries in other regions (such as Ireland, Chile, Israel, and Thailand).

Thanks to this increased understanding of the electronics industry, CINDE learned that Intel was starting the site selection process for an assembly and testing plant for one of their newest chips, but Costa Rica was not on the "long list." Despite some skepticism from their highest authorities, CINDE's specialists on FDI attraction started a campaign to get it on the list. They put together an effective presentation for Costa Rica, which was entered on Intel's list in November 1995.

After Intel's visit to Costa Rica in April 1996, Costa Rica became a top contender in the list, which at that stage included Argentina, Brazil, Chile, China, India, Indonesia, Korea, Mexico, Puerto Rico, Singapore, Taiwan, and Thailand. The best source of information about Intel's site-selection process is a study by Deborah Spar (1998), which I have complemented with personal interviews with Intel and CINDE representatives.

With three plants already in Malaysia, China and the Philippines, Intel decided to diversify and dropped Asian countries from the list. Many additional research visits by Intel to different locations narrowed the list to four countries: Brazil, Costa Rica, Chile and Mexico. By November 1996 the other three countries were dropped for various reasons, and Intel announced its choice of Costa Rica. Four factors led Intel to choose Costa Rica:

- The general characteristics of the country provided a favorable basis to attract skill-intensive FDI. In addition to the same characteristics which CINDE had identified in 1993 (see above), favorable factors included a nonunion work environment; a "pro-business" environment with a favorable attitude towards FDI; a good package of incentives that had clearly defined procedures and conditions and was

not subject to arbitrary negotiation (the EPZ system); and good location and transportation logistics.

- The country's growing emphasis and success in attracting high-tech FDI gave credibility to Costa Rica's case that it had the professional human resources required for an operation like Intel's. When Intel talked to several high tech-transnationals in the country during its site-selection process, the glowing reports and optimism of these executives were decisive in moving Costa Rica to a top position on Intel's list of countries for possible investment.
- The existence of an aggressive, effective and knowledgeable foreign investment promotion agency like CINDE was very helpful. CINDE was important in convincing Intel to consider locating in Costa Rica and helping Intel's people conduct research and obtain the credible and consistent information they demanded. It had links and credibility with the government and played a key role in arranging successful meetings between Intel executives and government authorities.
- The Government quickly understood the importance of an Intel investment in the country. The president personally met Intel executives and conveyed a very strong interest in its investment. He also motivated and coordinated the rest of the Government to help Intel as much as possible within the existing laws and regulations. The Government was very diligent in responding to Intel's concerns in areas like education, electricity and taxes.

The Government's responses were not special concessions made to Intel, but were generally applicable to other companies as long as they met the required conditions. In this sense, it could be argued that these were not concessions, but rather Intel-inspired reforms to improve the country's competitiveness. For example, education reforms included the addition of a one-year "certificate" program focused on technical skills and physics/chemistry competency and a one-year "Associate Degree" program focused on semiconductor manufacturing. Regarding electricity, rates were very high, so the Government asked the regulator to establish a new lower rate for energy-intensive industrial facilities. These incentives were valid generally, not just for Intel, and this is perhaps the main reason why there was almost no opposition to Intel's investment nor to the incentives it received.

With Intel's decision to establish its assembly and testing plant in the country, it became clear that attracting high-tech transnationals to the country was feasible and potentially effective as part of the development strategy of the country. What was until then a CINDE strategy became a national strategy.

THE FIAS STUDY AND SUBSEQUENT STRATEGIES

CINDE was aware that other weaknesses in Costa Rica's economy needed to be addressed if the country was to be successful in attracting FDI in electronics. Moreover, it needed a deeper understanding of the electronics industry so as to better design its FDI attraction efforts. With this in mind, CINDE hired FIAS in 1996 to develop "A Strategy for Foreign Investment in Costa Rica's Electronics Industry." The study's main finding was that:

> *"There is a basis for substantial expansion of foreign direct investment in the electronics industry in Costa Rica... The niches for Costa Rica would not involve mass market products, but rather those with smaller production runs that require relatively large inputs of skilled labor for set-ups and testing. The most attractive niches can be grouped into four basic technology areas, as follows: power technologies, PC cards and surface mount technologies, system integration technologies, call centers... Such products draw heavily on the main advantage that Costa Rica has to offer the world electronics industry: this is the labor force that is relatively well educated in relation to its cost. The education advantage covers a wide range, from operatives to technicians and engineers. There is also a widespread knowledge of English."*

The FIAS study also suggested promoting sectors that support the electronics industry, such as plastics, metal working, mold making and equipment service and repair. This would help develop "clusters" and increase competitiveness in these areas. It was recommended to do this through attracting FDI in these areas, as well as through backward linkages to develop such industries domestically. Finally, FIAS noted several obstacles to developing the electronics sector in the country and recommended improvements in intellectual property rights legislation, telecommunications and transportation infrastructure, the public system to support training, and the low quantity of graduating technicians and engineers with English proficiency.

CINDE used the FIAS study to define its strategic plan for the following years, starting with its 1997 plan objective to position Costa Rica as "the emerging electronics manufacturing center in the Americas." The idea of developing clusters in certain skill-intensive sectors was later reinforced by "Competitiveness Agenda for Central America towards the 21st Century", carried out jointly

The main advantage Costa Rica has to offer the world electronics industry is a labor force that is relatively well educated in relation to its cost.

by INCAE and the Harvard Institute for International Development (led by Michael Porter and Jeffrey Sachs).

In following years, additional CINDE research led to including the medical devices sector among its targeted sectors. Success came early in a 1998 decision by Abbott Laboratories to establish a sophisticated $60 million manufacturing plant in the country, and Baxter's decision to expand its presence with a $30 million investment. New opportunities opened up later in the business services sector with Procter and Gamble's decision to establish a Global Business Center for the Americas, with the expectation of hiring up to 1,500 professionals.

Objective: position Costa Rica as "the emerging electronics manufacturing center in the Americas."

Today, Costa Rica is following a strategy that appears to enjoy strong support from many different groups. That includes not only CINDE's continuing efforts to attract high-tech transnationals, but also a program sponsored by Inter-American Development Bank to help small and medium enterprises become their suppliers, and initiatives to increase the human resources needed for the new development model. This is complemented by more general policies to improve telecommunications (especially for the Internet and data transmission), improve infrastructure through private sector participation, improve intellectual property rights protection in compliance with the Uruguay Round, and develop better access to foreign markets through free-trade agreements with countries such as Mexico, Chile and Canada.

THE IMPACT OF INTEL ON COSTA RICA

When Intel announced its decision to invest in Costa Rica, it projected an investment of between $300 and $500 million. By December 1999, it had already invested $390 million and was employing more than 2,200 people, including over 500 professional employees, most of them engineers. Average wages for Intel employees were 50 per cent higher than the average in the manufacturing sector. For an economy with a GDP less than $12.5 billion in 1997 and a labor force just over one million people, this was an extraordinarily large investment. In fact, in 1999 Intel accounted for more than 60 per cent of the total growth experienced and almost 40 per cent of total exports. In 1999 Costa Rica ran a trade surplus for the first time in decades.

Of even greater interest and relevance is the impact Intel had on Costa Rica's ability to attract high-tech FDI and the economy's general competitiveness in skill-intensive industries. Intel's invest-

ment decision became news worldwide and tremendously improved the country's image as a viable economy and attractive investment location for high-tech companies. In a 1999 survey among possible investors, 72 percent of respondents claimed they had heard, seen, and read more about Costa Rica as an investment prospect after Intel's decision. Given Intel's reputation for rigorous site-selection research, other companies can in a sense "free ride" on Intel's research and be much more confident about investing in the country.

Using as its main selling point Intel's "stamp of approval" for Costa Rica as an investment location, CINDE launched a strong campaign to attract other large electronic manufacturers as well as Intel's worldwide suppliers to invest in Costa Rica. On the day that Intel announced its investment, the Minister of Foreign Trade predicted that the country could attract around 40 Intel satellite companies. The objective was not only to increase overall FDI, but also to form the electronics cluster that was envisioned in the 1996 FIAS study and in the INCAE/HIID Competitiveness Agenda.

Unfortunately, the Asian crisis of 1997 together with an industry downturn at global level significantly reduced the flows of FDI in the electronics sector. For example, Seagate — a large-scale manufacturer of hard-disk units — and Lucent abandoned their Costa Rican plan. Also, many of Intel's suppliers refused to invest in the country due to the risk of selling to a single buyer. A few Intel satellites did set up in the country, mostly small operations with very few employees, which contributed little to forming the desired electronics cluster.

Intel did generate a positive impact through backward linkages, forcing a significant improvement in the logistics area in less than three years. For example, FedEx and UPS initiated operations in the country, and now there are daily cargo flights to several destinations in the United States. AirExpress International, an international logistics and transportation company with a close business relation with Intel, invested through a joint venture with a local company.

Backward linkages also developed through domestic companies that supply Intel with specialized goods and services, as shown by two surveys (Larraín et al, 2001). One survey showed that a significant percentage of Intel suppliers received training from Intel and changed their organizational practices or their product variety due to Intel. The other survey indicated that Intel competitors believed that Intel generated changes in inputs markets from which they have also benefited, and had a positive effect on their own operations and the overall economy.

Perhaps the most important way Intel has benefited the economy is its collaboration with public universities to improve curricula and teacher training in technical fields, particularly with the Instituto Tecnológico de Costa Rica (ITCR). Generally, the presence of Intel

in the country has increased awareness about career opportunities in technical fields and engineering, leading to a very significant increase in enrollment in technical fields at public universities.

LESSONS FOR OTHER COUNTRIES

Though Costa Rica's success comes from the convergence of different policies and events going back many years, rather than from a grand national vision, some general observations may still be of value to other countries:

- Costa Rica's long-term commitment to investing in education has been the most important factor behind the recent developments. The country's main competitive advantage lies in a labor force that is well educated relative to its cost. Countries should not only focus on increasing coverage of primary and secondary education, but should also put in place technical high schools and universities that guarantee a steady stream of technicians and professionals in areas where the country has a competitive advantage.
- Many of the now dominant recommendations for economic development are validated: political and economic stability; rule of law, transparency and low levels of corruption; economic liberalization regarding international flows of goods and capital; and a "pro-business" environment with a favorable attitude towards FDI.
- The Export Processing Zone system appears to have been important in attracting FDI to Costa Rica. However, other countries will have to do without this kind of incentive, owing to the Uruguay Round agreement to eliminate export subsidies by the year 2003 in all developing countries. One obvious alternative, but not without its costs, is to establish aggressively low corporate income tax rates.
- CINDE played an essential role in attracting FDI and in determining a strategy geared towards the electronics sector that would later prove successful for the country. CINDE has the required characteristics to play such a profound role — a nonprofit organization with strong ties to both private and public sectors, apolitical and with no special relation to any interest group, with strong financial support. By its nature, this organization was able to establish long-term goals, do the required detailed and careful research, get the appropiate expertise and human resources, be selective in its approach towards FDI, and make sure that its efforts matched the country's competitive strengths.
- Based on the Costa Rica case, countries should carefully identify the sectors where they have a

strong competitive advantage and thus high-growth potential, and make sure that economic policy is consistent with the needs of these sectors. This, for instance, is what lies behind Costa Rica's strengthening of technical schools in informatics, electronics and metal working and mold making. This is also the rationale for its supporting the development of local suppliers to high-tech transnationals.

- One factor suggesting that the Costa Rican strategy will be maintained at least in the medium term is that responsibility is spread among many different actors in society. It is not only the Government that is running programs to strengthen the technical capacity of the country, but several other organizations are also helping, among them public universities, industry chambers, technical schools, and CINDE.
- The case of Intel's decision to invest in Costa Rica shows clearly the importance of transportation logistics for high-tech companies, whose products exhibit high rates of innovation (and thus require fast shipment of goods from factory to consumers) and a high value relative to size and weight. High-quality airport systems and friendly and open policies towards air travel and cargo companies seem advisable.
- Finally, rather than give special concessions to lure particular companies to invest in the country, it is advisable to adopt policies and reforms that are generally applicable as well as particularly important for the companies whose investment is being promoted.

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PATHS FOR ARAB COOPERATION

Well Mapped, Little Traveled

What is the balance sheet on cooperation among Arab countries to date, and what are the potential areas of future cooperation? These are among the key questions covered by the Arab Human Development Report 2002, *as summarized below. The Report was compiled by an independent team of Arab experts and published by the UNDP Regional Bureau for Arab States, with the Arab Fund for Economic and Social Development as co-sponsor.*

ARAB COUNTRIES have what it takes to attain adequate living standards for all their people, but they need to achieve economic integration and deepen inter-Arab trade to overcome dependency and vulnerability and make globalization work for Arab interests. According to the *Arab Human Development Report 2002*, the region needs greater regional cooperation because of the small size of most of its individual markets and the increased leverage that a united front can give in trade relations with other trade blocs such as the European Union. The Report concludes that the Arab Free Trade Area is a step in the right direction, but adds the significant proviso "provided it lives up to its promise".

On paper, the Arab region is one of the most cooperative and integrated in the world in every sphere — defense, culture, economy, freedom of movement for

capital goods and people. But not many of the agreements have been implemented or even ratified by the Arab countries.

The League of Arab States is one of the world's oldest regional bodies, and has many committees, conventions and agreements. So the areas for possible Arab cooperation are very well mapped, although not much travelled.

Despite all the agreements, inter-Arab trade accounts for no more than 7 to 10 per cent of total Arab foreign trade, a figure that has not changed since the 1950s. Arab investment capital flows more to the industrial countries, rather than inter-Arab destinations.

Based on an analysis of the obstacles and the potential, the Report points to whole new areas for integration. For example:

- Although Arab countries share a common written language, countries apply different standards for computer software, for Internet connectivity, and for mobile telephones. If the countries of the region are to benefit from economies of scale necessary to counter competition from other regions, then they need to coordinate to ensure interconnectivity.
- The region could also maximize its R&D investments by enabling different centres to specialize in areas of comparative advantage. Examples include water desalination in the Gulf States, computer programming in Egypt and Jordan, the phosphate industry in Morocco and Tunisia, or petrochemicals in Saudi Arabia.
- Higher education is an area where cooperation brings many advantages. Here, as in other fields of education, the common language permits collaborative work on, for example, curriculum development, textbook production, and teacher training.
- Shared language can become a means for Arab countries to catch up with the information train. Currently, the Arab world translates only about 330 books annually — one-fifth the number that Greece translates. Each year, Spain translates as many books as have been translated into Arabic in the last thousand years.

The Report also stresses the need for cooperation on the environment, to settle potential disputes among Arab countries over the shared use of these resources, and to strengthen the Arab voice in global discussions.

Some success stories show that cooperation is possible. Among them are the initiatives supported by the Arab Fund for Economic and Social Development, the Arab Monetary Fund, the Arab Foundation for the Insurance of Investments, and several joint Arab production, financial and banking companies.

The Arab Fund for Economic and Social Development has funded electricity, road and communication networks. Connecting the electricity networks

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alone has reduced electricity sector investment requirements and increased usage and cut costs. Extending the network to all Arab States could create an Arab electricity market similar to those of Europe and North and South America. Similarly, connecting the roads and railways would increase the flow of goods among Arab countries.

Above all, concludes the Report, the dignity and freedom of the Arab people demand that countries join together to provide human services: health, education and training, particularly for girls and women and people living in rural areas, along with strong efforts to abolish illiteracy, especially in the less developed Arab countries.

Cooperation in financing and implementing such initiatives should be given priority in joint Arab action because they are at the heart of human development — and human development is at the heart of securing a freer, more secure and more fulfilled future for every citizen of all the Arab States.

The region covered by *Arab Human Development Report 2002* consists of 22 Arab countries with a combined population of 280 million. The topics covered include health, habitat, education, the economy, employment, freedom, women's empowerment and governance.

Lessons on Public Housing from Singapore for São Paulo

BY W. E. HEWITT

In the mid-1990s São Paulo began a public housing program based on urban renewal strategies developed three decades earlier in Singapore, half a world away. Despite some modest success, the program was abandoned by São Paulo's government in early 2001. This raises questions about how south-south transfer processes can be made to work in practice, as discussed here by W. E. Hewitt, Ph.D, Associate Vice-President (Research) and Sociology Professor at the University of Western Ontario in Canada.

INTRODUCTION

In an era of instant communications, globalized commerce, and continuing advances in food production and disease prevention, housing remains one of the most basic human needs still unmet or largely compromised on a massive scale in many areas throughout the world. Housing deficits are especially acute in the major urban agglomerations of the developing world. Millions are forced to live cheek by jowl in downtown slums or in sprawling "suburbs" of precarious dwellings with few services and a minimum of infrastructure.

Though generally recognized as a priority by developing world planners and politicians alike, there are precious few examples of national, regional, or local housing policies which have worked effectively to resolve this issue. This is true even in some of the more affluent developing regions, such as Latin America. Here, urban planning per se has evolved only recently, with policies directed specifically towards housing still rare. Those in place remain so seriously underfunded as to offer very little relief to the millions of families in need.

As Latin American municipal govern-

ments increasingly look outward in their attempts to seek solutions to the problems which affect them, change may, however, be on the horizon. With a now global trend towards south-south cooperation and information exchange,[1] many Latin American cities have begun to look seriously at innovative housing policies and practices from other regions of the developing world as possible models for emulation in the domestic context.

One such borrowed "innovation" in the housing area was adapted by the city of São Paulo — Brazil's largest urban centre — in the mid-1990s, drawing on Singapore's decades-long experience with urban renewal. Dubbed Projeto Cingapura (Singapore Project) or PC for short, this program of public housing verticalization aimed at the city's growing housing deficit, estimated at over one million units. Given existing urban densities and the high cost of urban land, the program seemed especially well suited to meeting São Paulo's public housing needs. Despite its initial promise and successes, however, the PC provided for only a modest increase in available housing stock and was formally abandoned by the city government early in 2001.

Using data obtained from archival sources and field interviews conducted during the main phase of project construction, this study explores both the promise and the challenges which faced the PC during its short history. It seeks to develop a broader understanding than is currently evident in the literature with respect to the potential and especially the limitations of south-south technology and information transfer. The study clearly reveals that effective models for emulation in the housing area, while critical to the process, cannot in and of themselves ensure the success of the transfer process. Without political will, resources, and effective management and follow-up, even the best of innovations will have difficulty in adapting to foreign climes.

SÃO PAULO'S URBAN HOUSING PROBLEM

Rapid urban growth since the 1960s (UNCHS, 1996) has created a crisis of major proportion in the provision of suitable housing in most, if not all urban areas in the developing world (see Brandt, 1980; Rodwin, 1987; Struyk, 1988; Werna, 1996). This situation has increased public awareness of housing problems, along with strident calls for action on the part of aid agencies and nongovernmental organizations to address the issue through national and local housing strategies. Some action plans have focused on the provision of basic housing in single or multiple dwelling format, with concomitant investments in local services and infrastructure — usually targeted to the poorest populations. Another common strategy is slum upgrading by either contracted or self-labour to improve the quality of existing housing stock. Government sponsored housing finance schemes are also increasingly common, as are incentive schemes encouraging private sector developers to

provide low-cost housing to those who may not otherwise be able to afford it (Brennan, 1993).

However, the overall impact globally of government action on the housing front is remarkably limited. In Thailand, for example, the National Housing Authority produces fewer than 8,000 units per year, a paltry fraction of the total 250,000 units required. In Madras, India, less than one public housing unit is completed for every five needed (Brennan, 1993).

São Paulo's recent experience in public housing reflects these dismal statistics. Between 1960 and 1991, São Paulo's population skyrocketed from 3.6 to over 9.6 million (PMSP, 1996: 49), owing mainly to large-scale in-migration from the impoverished northeastern regions of Brazil. By the 1970s, growth rates in many parts of the city had reached 10 percent per year, with most migrants experiencing severe difficulties in locating adequate housing (Kowarick and Bonduki, 1994). By 2000, the housing deficit in São Paulo was estimated at approximately 1 million units ('Marta pretende regulizar', 2000). Substandard housing in some form or other occupied about 70 percent of São Paulo's area — approximately 1,500 square kilometers, or three times the size of Paris (Greenfield, 1994: 103). For example, the number of slum dwellings or *favelas* grew astronomically from a handful in 1973 to well over 350,000 in 1993. These residences are now home to some 2 million individuals, around 20 percent of the total municipal population. Residents of converted older homes and factories in São Paulo's inner core — known as cortiços — are now estimated to number over 500,000 (PMSP, 1996: 146-148; 'Cortiços e favelas', 2001). For this segment of the population, living conditions are extremely precarious. Frequently whole families share one room, sometimes without proper ventilation, electrical wiring, or plumbing. Rat and cockroach infestations are common.

Over the years, disparate attempts to deal with the housing crisis in São Paulo have been spearheaded by an alphabet soup of agencies established at the federal, state, and local levels. These included a federal bank (BNH) which funded urban housing projects and low-interest loans to lower and middle-income home buyers; a state-level cooperatives institute (INCOOP) which helped build housing for state workers in a range of occupations (teachers, transit workers, etc.); a state-level development company (CODESPAULO) for housing for low-income families and financing of slum upgrading projects; a collaborative private sector/state company scheme (COHAB) to develop housing for limited-income families; and a municipally managed COHAB for public housing construction, which also funded self-help projects ("mutiroes") to upgrade substantdard housing.

Between 1965 and 1982, about 154,000 housing units were constructed or upgraded, mostly through São Paulo's COHAB (Shidlo, 1990: 76, 81). Since

the early 1980s, due to cutbacks at federal and state levels, the municipality's burden of public housing construction has increased still further (Shidlo, 1990: 77, 82). Yet the number of units constructed by the municipality each year since the mid-1980s has been pitifully small, averaging less than 6,000 per year (PMSP, 1996: 2, 6; Werna, 1995) — hardly sufficient to even begin to meet the extant need.

More recently, some attempts were made to speed up public housing construction. During the 1989-1992 administration of leftist mayor Luiza Erundina, the municipal government invested in more cost-efficient self-help housing initiatives, known as *mutirões*. The city provided funding directly to community groups, which in turn engaged local families to build new or renovate existing houses. Still, less than 8,000 units were built or improved during each year of the Erundina administration (Kowarick and Singer, 1994; PMSP, 1996: 2, 6; Werna, 1995).

GLOBAL SEARCH FOR SOLUTIONS

With the election of right-wing mayor Paulo Maluf in 1992, São Paulo's municipal government began to seek more "radical" solutions to the city's housing crisis. Eschewing past practice, Maluf initiated an ambitious urban renewal plan borrowed from Singapore, a city-state with one of the world's most remarkable successes in urban renewal and housing construction.

São Paulo's search for solutions from other parts of the developing world — in this case, Asia — is part of an emerging global trend towards south-south technology and information transfer. Contrasted with more standard forms of north-south transfer (typical of most bilateral or multilateral aid strategies), south-south transfer is widely seen as offering opportunities for partner organizations and governments to interact as equals, and to directly share experiences leading to workable solutions of direct relevance and benefit to populations at risk. Increasingly studies have focused on information sharing and transfer in a variety of contexts, from environment (Clusener-Godt and Sachs, 2001) and food security (Nwanze, 2001), to trade (Brown, 1998) and science and technology (Hassan, 2000).

In urban development, Brazil's Instituto de Administraçao Municipal (IBAM-Institute of Municipal Administration) has actively supported transfer of know-how and resources to urban governments in a range of developing countries. Since 1993, for example, IBAM has served as consultant to the Peruvian government regarding municipal affairs in the formulation of the country's new constitution; provided information to Cuba on the construction of low-cost housing; worked in a project to strengthen local government in Mozambique; and finally, helped set up a regional planning institute in Indonesia (IBAM Newsletters, 1993-95).

On a broader scale, another example

of south-south transfer is the Mega-Cities Project, which links 18 of the world largest metropolitan areas in an effort to promote exchange of ideas and technological innovation (see Badshah and Lazar, 1995). In one case, methods used in a Cairo project offering the poor opportunities to reclaim and recycle waste products to sell for profit (to finance local neighbourhood improvements) were transferred to both Bombay and Manila. In another case, an anti-littering strategy aimed at children (using cartoon characters), which was developed in Bangkok, was later implemented in Rio de Janeiro.

Despite such examples, what we know about the process and critical outcomes of south-south cooperation remains limited, with much of the literature to date focused on its more generic aspects and broad successes. This makes São Paulo's experiment with housing strategies developed in Singapore both intriguing and illustrative, because it reveals not only the promise, but also the complexities and the challenges associated with south-south exchanges.

The course of São Paulo's experience with the Singapore model, its successes, attendant frustrations, and failures, were studied over five years, from the inception of the project in 1995 to its end-point early in 2001. Research data were drawn from site visits to PC projects in 1997 and 2000, interviews with municipal administrators, PC project coordinators and residents during the main phase of project development in 1997, and a review of archival material and media reports.

THE SINGAPORE MODEL

Singapore's successes in slum removal and "verticalization" are now legendary. Its strategy mainly responded to critical urban overcrowding resulting from unprecedented levels of in-migration. Work on the strategy began in 1960 with the establishment of the Singapore Housing and Development Board (HDB). With generous government funding, the HDB has overseen construction of approximately 700,000 flats, housing over 85 percent of Singapore's total population (SHDB, 2002). Much of this construction was completed by the late 1970s and early 1980s. Since the 1990s, the HDB has concentrated primarily on upgrading, applying new design concepts to deal with an increasingly sophisticated and upwardly mobile population and to position Singapore firmly as a global city (see Goh, 2001).

In its initial thrust into the housing market, the HDB actively planned and built housing blocks in "new towns", with a full range of urban services and infrastructure. During earlier phases of the project, one, two, and three room apartments were constructed, ranging in size from 23 to 53 square metres. During later phases, larger flats were introduced, largely to meet demand among middle-class residents. Initially offered only for rent, since the late 1960s, a home-purchase plan has also been in effect, offering ownership to

resident families at rates below real estate market prices (Wan, 1975).

Singapore's housing program has also traditionally included a strong social component. During the clearing and construction phases, residents of existing housing settlements were offered alternative accommodation. In addition, they were compensated for land which they had left behind. In 1964, the NHB paid out such compensation at a rate of $26.90 per square metre, an amount which has increased over the years. Residents also received a relocation allowance, and a rental subsidy of $15 per month for the initial three-year period of their tenancy (Wan, 1975: 13-14). In addition, at least 10 percent of space has typically been set aside for small, labour- intensive businesses so residents can retain and expand commercial activities at home. Attractive landscaping and leisure space are also incorporated in every complex, helping provide a sense of "neighbourhood" (Yeh, 1975: v-vii; Wan, 1975: 10).

By the time HDB's main construction initiatives were well underway and many were complete, resident satisfaction with Board efforts was already high. In a 1973 survey, As Yeh and Lee (1975) report, well in excess of three-quarters of residents rated factors such as general living conditions, the social environment, access to shopping and services, and work as either satisfactory or acceptable, with just a minority of residents, a third or less, expressing dissatisfaction with children's playground facilities, noise, parking, and access to police.

FROM SINGAPORE TO SÃO PAULO

During the Maluf administration (1992-1996), planners and administrators thought the Singapore model was especially applicable to São Paulo, owing to both the limited availability and high cost of urban land. Given the generally limited successes of previous public housing schemes, and the well publicized success of the Singapore strategy, a decision was taken to devote significant resources to a home-grown version of the project — Projeto Cingapura (PC). In 1994, some R$7.5 million (then about US$ 7.5 million) was targeted for the PC, increasing dramatically to R$67.5 in 1995, and R$206.5 million in 1996. In 1997, the administration of Maluf's political protegé, Celso Pitta (1996-2000), planned to increase this by about half — to about R$300 million — with supplementary funding from the Caixa Economica Federal (a government lending agency) and the Interamerican Development Bank (SEHAB, 1997). If maintained at this level for the subsequent four years of the Pitta administration, such funding would have provided for approximately 90,000 apartment units, or approximately 87 percent of the total 103,000 housing units promised by Maluf and Pitta, respectively, at the beginning of their terms ('Projeto Cingapura vai deixar', 2000).

In terms of operations, São Paulo's PC mirrored its better known Asian counterpart to a remarkable degree. Responsible to the municipal Housing Secretariat,

day-to-day administration of the PC project was overseen by an appointed board of directors which did site selection and oversaw the tendering process for choosing construction (interview with PC Director, 1997).

Most apartment blocks were constructed in areas immediately adjacent to slum housing (typically *favelas*) whose residents were to receive priority tenantship. Early buildings were typically low-rise, with larger buildings preferred as the project advanced. Apartment size has typically been about 40 to 50 square metres, slightly less than Singapore residents got during early phases of the project. Once constructed, ownership of buildings passed to the municipal COHAB, which is responsible for collecting rents of R$57.00 per month (plus a small condominium fee), guaranteed to tenants for a 25-year period. Although the Municipal Council passed a law allowing ownership of the units, to date none have actually been sold (interview with PC Director, 1997).

As in Singapore, a strong social component was been built into the project. Every new project had been assigned a social worker, whose initial task was to map the slum area and develop a list of residents. The social worker then assisted with the transfer of families to temporary settlements as the new buildings were constructed. Families also received information about the "dos" and "don'ts" of apartment living.[2] Landscaping, sports fields, and leisure areas were also routinely incorporated in the layout of the development.

At the same time, in a major departure from the PC's progenitor, no provision was made for accommodation of small-scale businesses within the projects (interview with PC architect, 1997). This in turn has limited the ability of residents to earn income on site, as well as creating other difficulties.

OPPORTUNITIES AND CHALLENGES

In principle and structure, Projeto Cingapura has a good deal in common with its Singapore counterpart. It appeared poised to deliver in São Paulo what so many proposals in the past had failed to do: affordable, quality housing for some of the poorest citizens. Residents of former slum areas would be provided quality housing near their former homes and at reasonable cost. Remaining in effect "on-site", they would stay close to their places of work in the city, in areas which most could scarcely afford through other means, given the high cost of urban land.

Many residents of São Paulo's less affluent neighbourhoods appeared to welcome the initiative, even lobbying for subsequent phases of the project to be developed in their own areas. According to one respondent and former leader of a *favela* in a neighbourhood known as Jardim do Arpoador, support for the PC was overwhelming. In an April 1995 plebiscite, 847 or 95 percent of residents

voted to accept a proposal from the city to locate a PC apartment complex in their neighbourhood, with just 44 or 5 percent disapproving (interview with PC resident, 1997).

Those who benefited directly from the PC initiative have lauded the relatively short turn-around period between *favela* elimination, transfer to temporary housing, and construction of new buildings. For the Jardim Arpoador site, it was a mere 9 months from first announcement of project construction until the first families moved into their new units (interview with PC resident, 1997).

The "community" atmosphere envisioned by the project appeared also to be slowly taking shape, with residents increasingly organized to represent their needs, and leisure/sports areas developed on site for neighbourhood children. More than a few innovations designed to reduce costs for residents have also been implemented across the system. In 1996, the city announced that all buildings constructed from that point would include equipment for electricity from solar power, saving residents an estimated 45 percent on electric costs ('Cingapura ganha', 1996).

At the same time, Projeto Cingapura has been beset by some serious challenges related to funding and unit cost, program management, resident quality of life and eligibility, costs of ownership, and local administration. Such problems are summarized below.

Funding issues

Program funding has remained perhaps the most serious challenge. Despite forecasts of significant financing (see above), the Maluf and Pitta administrations largely failed to apply the promised resources. Maluf, in particular, was stridently criticized in the public press for diverting some R$1.7 billion destined for PC social services and housing to other purposes. Press reports claimed that this amount could have built over 100,000 public housing units, providing shelter for up to a quarter of the city's population in *favelas* ('Maluf tira', 1997).

Adding to this problem was the escalation of unit costs. Under previous regimes, the cost of housing units in São Paulo had been in the R$15,000 range. During the Maluf and Pitta administrations, however, the cost of the PC units skyrocketed to nearly R$25,000, further limiting the municipality's ability to produce the required number of units.

As a result of both factors, the numbers of PC units produced during the Maluf and Pitta administrations totalled only about 14,000. This is far from the nearly 100,000 projected, and only a fraction of that required to begin to deal seriously with São Paulo's housing deficit.

Program issues

These issues, widely reported in the local press, seriously affected the credibility of the program and its ability to attract funding from public and other sources. To begin with, there is evidence that the

Maluf and Pitta administrations effectively used the PC to "play politics" as opposed to dealing directly with the housing needs of the poor. According to press reports, during early phases, the vast majority of PC apartment complexes were constructed in areas with high public visibility, thus serving political propaganda purposes. For example, it was revealed that of the first 41 complexes constructed, 16 were located near or on major roadways and clearly visible to passing motorists — by definition, middle-class voters. By contrast, in the area of the city with the most favelas, the Freguesia do Ó, not one unit had been built ('Freguesia do Ó',1996).

The tendering process used to select construction companies for individual housing complexes was also shown to contain serious flaws, resulting in favoritism and potential corruption. In one widely reported case, a construction company which lost a bid publicly complained that the Housing Secretariat had illegally required that the successful company must be conversant with the objectives and requirements of one of the project's major and more recent funders — the Interamerican Development Bank. The company said this requirement favored larger development concerns with which the municipal government was already working ('Financiador diz', 1997).

Claims also arose that, during the early years of the PC, the Maluf administration turned a blind eye to developer attempts to save money and increase profits by using substandard construction materials and practices. In several cases, it was revealed that in place of solid concrete posts required by municipal building standards, some construction companies used hollow blocks filled with concrete. Construction companies argued that this should not pose undue risks, but the safety of residents was clearly put at risk by such illegal practices ('Prefeitura não vê riscos',1996).

Quality of life issues

As mentioned previously, levels of resident satisfaction in Singapore's various housing complexes were uniformly high during the mid-term phase of the urban renewal process in the mid-1970s. In São Paulo, however, once many buildings were occupied, residents began to identify serious quality of life issues. Living space was widely seen as inadequate, with one respondent lamenting that the units are "just the size of a matchbox" (interview with PC resident, 1997).[3] At just 40 to 50 square metres, there is little room in the average PC apartment for a family of four. Some have even stated publicly that the PC units, with generally cramped quarters, "are worse than in the *favela*; one is piled on top of the other; it's a huge vertical favela" ('Euforia na favela', 2001).

Living in such high-density settlements was a novelty for many residents used to more informal living arrangements. As social worker Eliete Barbosa explained, almost everyone had "to be taught the basics of apartment living:

what to do with garbage, how to operate equipment, the responsibilities and duties of apartment dwellers" (interview with PC social worker, 1997). While the learning curve may accelerate as former *favela* residents quickly occupy their new dwellings, conflicts inevitably have resulted, causing strained relations between neighbours.

For example, many residents were not aware of restrictions on keeping animals in the apartment complexes. Small animals such as dogs or cats are allowed. But many residents attempted to bring in goats or other large animals which they had raised in their former dwellings, sometimes to earn income (interview with PC social worker, 1997). This creates problems for other residents who must share their limited space with livestock, while removing animals raises the ire of owners who may be deprived of a principal source of livelihood.

Eligibility

Tensions within the PC apartment complexes have also arisen as a result of eligibility rules. Prospective residents have to produce evidence of a minimum monthly income of approximately R$200 and register each family member (including children) prior to assuming occupancy. Single men have not been allowed to occupy units, nor individuals with criminal records. In the early stages, however, such rules were not always communicated clearly to prospective residents, thus leading to disqualification of individuals who then had to seek accommodation elsewhere in the city, typically in another *favela* (interview with PC resident, 1997).

In some cases, friends or relatives moved in with tenants, who in turn then left the complex. This broke the rule that only the original *favelados* may occupy units, but little has been done to rectify the situation. In some cases, residents reportedly "sold" their apartments, though no such arrangement has been mandated, leading to a "black market" in public housing. In the end this may have hurt some poverty-stricken individuals most in need of subsidized housing (interview with PC social worker, 1997).

Another more generic issue related to eligibility, according to one respondent, is that resentment against those favelados lucky enough to obtain PC housing has grown within the surrounding communities. Many believe the favelados have been given "free" housing, which is not the case. Even those who know the costs of residency in the projects have felt that many favelados were "jumping the queue." The sense of "injustice" has been particularly acute for the so-called working poor who own their land and have managed to build rudimentary dwellings on their own over a period of years. Why bother trying to get ahead, many have felt, when one is more likely to get a brand new apartment by doing little or nothing. Such sentiment has obviously not created a positive climate between PC residents and their neighbours still struggling to make a life for

themselves (interview with PC resident,1997).

Financial issues and ownership

Up-front costs of apartment rental have been modest at R$57 per month, but other costs have arisen for residents on tight budgets. For example, residents have to pay a "condominium" fee of up to R$15 per month, as well as all electricity charges. For low-income residents, such charges have left little for food, transportation, clothing, and other necessities of life.

While the rent charge is guaranteed for 25 years, no such predictability exists for the condominium fees or utility costs, making residents worry about new charges to come. As one explained, "they don't charge for water yet, but they likely will. Also, we don't pay any municipal taxes, but we may have to soon" (interview with PC resident, 1997).

In some complexes, resident concerns over rising costs have been translated into action. In April 2000, PC residents blocked a nearby arterial road to protest city plans to evict residents who were in arrears on rent ('Prefeitura ameaça', 2000). By August, nearly 58 per cent of all PC residents had failed to pay rent on time, some accumulating substantial back payments ('Devedores do Cingapura', 2000).

Such financial problems have been exacerbated by restrictions on commercial activities in the complexes. In the Singapore model, labour-intensive businesses were not only allowed but encouraged, and spaces for these were incorporated in the infrastructure of apartment blocs. In São Paulo, this was not done, in some cases eliminating possibilities for residents to continue earning income from self-employment (interview with PC architect, 1997).

The inability of residents to purchase their units may also be a factor. Although allowed by municipal law for some time now (Interview with PC Social Worker, 1997), no units have to date been offered for sale. Selling their units may be the only option the poorest families have to pay back rent owed and to attempt to create a new life elsewhere. But the city is caught on the horns of a dilemma. Any sales scheme could easily set up a speculative market situation that prices most poor families out of the running. Controlling prices is an option, but could be easily skirted through extra-legal "turn-key" arrangements between sellers and buyers.

Management issues

As previously mentioned, once construction was completed, ownership of PC buildings was transferred to a COHAB. Under the original plan, management was to fall to local resident associations, which would function much like condominium boards. Such boards would be responsible for day-to-day operations of the facility (e.g. maintenance and repair, common utilities, etc.) and for resolving tenant disputes (interview with PC social worker,1997).

This democratic model of governance would appear to be the exception rather than the rule. One building resident reported that the building committees were hardly democratic and, where existent, were largely appointed by the social worker assigned to the project (interview with PC resident, 1997). Social workers also reportedly were authoritarian about maintaining order, threatening to evict tenants who did not obey building regulations or engaged in disruptive behaviour. "It is the social worker who rules," claimed the respondent, with some decisions not made in the best interests of the tenants. According to the respondent, the social worker has been known to make exceptions with respect to tenancy. "The rules state that new people [i.e. people not living in the local *favela*] are not supposed to be allowed in, but sometimes the social worker would allow them" (interview with PC resident, 1997).

Whatever management structure has been in place has been inadequate to deal with resident concerns. In several cases, residents have felt it necessary to resort to demonstrations and acts of civil disobedience to press their claims. In April of 1998, for example, approximately 500 residents of a PC apartment block in a northern neighbourhood of São Paulo blocked an arterial road to protest the lack of security, infrastructure (e.g. street lighting), and regular bus service in their complex. In another neighbourhood in the western region of the city, a similar protest was mounted, again focusing on the lack of policing in the area. In both cases, vehicular traffic was severely impeded, and the protests drew strong and at times violent reaction from local police ('Moradores de Cingapura', 1998; 'Protesto antiviolência', 1998).

In August of 2000, similar protests were mounted across the city by residents who were in arrears on their monthly payments. They were reacting to a letter from the Secretariat of Housing requiring them to pay the rent owed or face eviction. Rather than deal with these issues through local building committees, residents in at least four apartment complexes took to the streets "to burn tires, throw stones, and interrupt traffic." The protests only abated once the Secretariat agreed to review policy and procedures and undertake closer study of residents in difficult financial conditions ('Prefeitura ameaça', 2000; 'Para moradores', 2000; 'Para governo', 2000).

CONCLUSION

While massive public housing construction by the Singapore government during the past four decades has almost uniformly been judged a success, the same can only be partially said of São Paulo's Projeto Cingapura. In theory, the project held out a great deal of promise, with strong potential to answer a critical need in a city with a large housing deficit and where the cost of urban land has skyrocketed in recent years. In reality, however, the funding applied to the project by the Maluf and Pitta administrations has fall-

en well short of projections — at one point in the hundreds of millions of dollars — as has the number of units constructed. Of the tens of thousands projected, in fact, less than 14,000 were delivered, and at a cost per unit far higher than other, more traditional housing strategies. Added to this are some very real problems in the project, from the tendering process and the quality of construction, to resident quality of life, tenancy and ownership, and management of the complexes.

It perhaps should come as no surprise that with the election of socialist mayor Marta Suplicy in 2000, São Paulo's housing strategy has taken a new turn. While vowing to complete approximately 1,000 unfinished Cingapura units, the municipal administration has formally announced that the "Projeto Cingapura will no longer be a municipal priority" (Projeto Cingapura vai deixar', 2000). Promising to apply over $R3 billion to housing during its term in office, the Suplicy administration will focus instead on a housing strategy designed to obtain maximum impact for minimum cost, and to involve project beneficiaries directly in the process. As in the case of the previous administration of PT mayor Luisa Erundina, the mutirão has become the cornerstone of São Paulo's housing strategy, with financial assistance to families in self-construction or upgrading of their own homes. Such assistance is estimated at between $R11,000 and 15,000 per unit, as opposed to the per unit cost of a Cingapura unit in excess of $R20,000 ('Projeto Cingapura vai deixar', 2001).

Whether or not the Suplicy government is able to produce the 50,000 units it is now promising remains to be seen. What is more certain is that any pretentions which São Paulo city hall may have had in the past to transform South America's largest metropolis into the mirror image of Singapore have largely been laid to rest.

Do the problems faced by the PC in São Paulo imply that the potential benefits of south-south or lateral information and technology transfer in the housing area are limited? Not necessarily. But for such large-scale experiments such as this to work, a number of supports must be in place, not least of all sufficient public financing — always scarce in the developing world. Moreover, municipalities seeking to adapt innovations locally must ensure that management supports are clearly in place, and that attention is paid to critical factors including project integrity (especially transparency and accountability), resident quality of life, eligibility, and ability to pay, and local management capacity.

NOTES

[1] See for example, studies undertaken by Kamibeppu (1994) or Herrera (1995). The key journal in this area is *Cooperation South*, which for a number of years has served as the principal source of information and debate

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regarding south-south interchange for development.

[2] In addition, to support local income generation, developers attempted as a matter of policy to employ local people in the construction process — if not as skilled or casual labour, then perhaps as security guards or in other roles.

[3] The names of all PC residents cited are pseudonyms.

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Africa:

FROM THE OAU TO THE AFRICAN UNION*

BY ABDALLA BUJRA

The pan-African movement and the search for continental unity has roots in the 1800s, and now has a new start with the inauguration of the African Union in July 2002. The struggles against racism and colonialism and then to protect the fragile sovereignty of new states were succeeded by the search for national development, regional cooperation and an African economic community. Can the new African Union, now working to get into operation, improve on this record despite the impacts of globalization and structural adjustment? The background and the prospects are assessed by Dr. Abdalla Bujra, who is the Executive Director of the Development Policy Management Forum in Addis Ababa.

INTRODUCTION

A perceptive observer who is well informed about the Organization of African Unity (OAU) and who attended the inaugural meeting of the African Union (AU) in Durban in July 2002 compared the launching of the two organizations as follows:

> *"The OAU was founded in an era of militancy and confident optimism: Africans believed that having achieved sovereign independence, the world was at their feet. The leaders of that era, including Nkrumah, Nasser, Nyerere, Sekou Toure and others, had acquired the status of giants and visionaries. By contrast, the launch of the AU was sober and muted, with little incendiary rhetoric or passion. Critics can point to the weakness of the AU institutions and their inherited arrears. But much of the Summit was businesslike and realistic. Africa has learned much" (Mohammed, 2002).*

What accounted for the difference between the two events? The brief

* This article is based on a lecture delivered by Dr. Abdalla Bujra at the African Centre for Research and Training in Social Development, Tripoli, Libya, on 23 September 2002.

answer is that African countries are worse off economically today than when OAU began in 1963 and are mired in internal conflicts of various intensity. Most African leaders can hardly claim to have control of their economic and political policies and therefore of the destinies of their countries. Africans now understand that the main source of their problem is Africa's position in the asymmetrical and powerful global system. However, many believe that if the AU succeeds, it may ameliorate the enormous difficulties Africa is facing. Hence the businesslike approach and the anxious but muted optimism.

FROM THE PAN-AFRICAN MOVEMENT TO THE OAU

The founding of the OAU was the culmination of a long struggle by the Pan-African movement, which goes back to the 19th century. The movement was essentially born outside the continent, driven by black intellectuals of African descent in the diaspora — in the US, the Caribbean and Europe. At first the movement was essentially a protest of black people against their exploitation, against racism, and for the dignity and uplifting of the black people. The leaders were middle-class intellectuals in the US and the Caribbean, such as W.E.B. Du Bois (African-American) and Padmore (Caribbean).

The first Pan-African conference was held in London in 1900, followed by others in Paris and New York. The most significant meeting and the pinnacle of the movement was the fifth Pan-African Congress in 1945 in Manchester, England. It was different from previous meetings in three fundamental ways. A large number of activists attended — over 200 persons from the US, Europe and Africa. For the first time, leading African nationalists took active and prominent parts — such as Kenyatta, and Nkrumah, who was Secretary of the Congress (W.E.B. Du Bois was its Chairman). The Congress stressed "for the first time the necessity for a well-organized, firmly-knit movement as a primary condition for the success of the national liberation struggle in Africa" (Nkrumah). "Pan-Africanism was no longer simply a protest movement by people of African descent in the Caribbean and the United States; it was becoming a weapon with which African nationalists could fight colonial rule" (Lamelle).

Pan-Africanism became a weapon with which African nationalists could fight colonial rule.

The pan-African movement was strengthened when Ghana became the first black African country to gain independence and organized the All-Africa

Conference in Accra in 1959. At that time most African countries were still struggling against colonial rule. For the first time, the Accra meeting brought together on African soil nationalists from all over Africa, with the central theme of solidarity and unity in the struggle against colonialism. According to the late Abdul Rahman Babu, the Accra meeting provided an important psychological, political and practical boost to nationalist movements within the framework of pan-African unity which Nkrumah strongly advocated. It also became apparent to all the nationalist leaders who came to Accra that an African state (as exemplified by the Ghana government's role in organizing the Conference) was key to the struggle against colonialism and towards economic development and political unity after independence.

In 1963, four years after Accra, the Organization of African Unity (OAU) was formed in Addis Ababa by African countries (except Southern Africa) which had achieved independence through nationalist struggles driven by Pan-Africanism. The struggle against the remaining colonialism in southern Africa and for continental unity, which until then was a mass movement of people, was taken over by independent states under the auspices of the OAU. Pan-Africanism thus ceased to be a mass movement and was transformed into an ideology driving a state-based continental organization.

EVALUATING THE OAU: FROM ADDIS ABABA 1963 TO SIRTE 2001

What progress, or otherwise, has Africa made since the formation of the OAU in 1963 up to the formation of the AU at Sirte, Libya, in 1999 and its inauguration in Durban, South Africa in 2002?

Prior to the 1963 Addis Ababa founding summit of the OAU, there were passionate debates throughout Africa on two main questions:

- Should full continental political unity be established immediately at OAU's founding, or be achieved gradually through a building-block approach by first strengthening the new states and then establishing sub-regional economic blocs?
- Should development be carried out through social and economic planning driven by the state, or be based on and driven by free and open markets with foreign investment playing a major role?

Around these questions there emerged two ideologically opposed groups of countries — the Casablanca bloc, which stood for development based on social planning, and the Monrovia bloc, favoring market-driven development. The two blocs also had a different approach to external relations — delinking and relinking, as opposed to strengthening inherited colonial links.

After its formation, the OAU went through three main phases of evolution, as follows.

Phase 1: 1963 –1980

The founding OAU Summit adopted the gradual approach of strengthening the new states, but retaining aspirations for continental unity as a driving ideology. By resolving the first issue this way, the OAU denied itself any powers over the sovereignty of the new states and therefore could not impose on its member states which development approach they should adopt. The Casablanca and Monrovia blocs soon dissipated, but several countries adopted the social planning development model — e.g. Egypt, Ghana, Tanzania, and Guinea. These countries soon faced great difficulties from the former Western colonial powers and the Americans, who worked hard — by persuasion or covert support of military takeover — to dissuade them from following the "socialist" model of development.

The two most important Charter objectives that drove the OAU from its inception to 1975 were "to protect the fragile sovereignty recently achieved by African states, and to help those still under colonial or racist rule to achieve sovereign independence" (Mohammed, 2002). During this period, economic development was not on the OAU agenda. It was mainly concerned with the few interstate conflicts that took place at the time, and with the struggle to eradicate racist and colonial rule in southern Africa. While the first concern involved mediation and some practical action by the OAU, the second concern was mainly conducted through the OAU Liberation Committee, which provided political, diplomatic and some financial support.

Another important principle for OAU during this period was the equality of all member states. This meant that the OAU and all continental African institutions were "driven by the lowest common denominator's approach, to cater for the wishes of the weakest and most undemocratic states. Sovereignty has been fetishized" (Mohammed, 2002). In the famous words of the late President Nyerere of Tanzania, the OAU became essentially "a talking club of Heads of State." By organizing the 6th Pan-African Congress in Dar es Salaam in 1976, with its theme being the liberation of southern Africa, Nyerere tried to revive the Pan-African mass movement and perhaps to strengthen its link with the liberation movements of southern Africa.

The OAU was essentially "a talking club of Heads of State" in the 1970s, but pursued a new agenda after the 1980s and made important contributions to Africa's development.

There are two main reasons for the OAU's lackluster behavior and being labeled a "talking Club". First, during

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the 1970s the fierce Cold War seriously affected African countries. Many were forced to take sides ideologically. Their visions of development became deeply divided among socialist (influenced by the Scandinavian countries), Marxist (influenced by the Soviets), and capitalist (influenced by the American-led West) visions. The Cold War thus affected both their internal model of development and their external relations. In the face of this powerful external force, the OAU became powerless and inactive.

Second, from 1960 to 1975, Africa on the whole was doing well economically. African growth rates were 4.5 per cent in GDP, 2.8 per cent in exports, 1.6 per cent in agriculture, and 6 per cent in manufacturing. "In retrospect, the period 1960-75 has, tragically, turned out to be Africa's golden era!"(Adedeji 2002:.6).

But by the end of the 1970s, Africa was facing serious economic crises. "The strong optimism of 1960s concerning economic development slowly gave way, first to hesitation, then to pessimism, and by the end of the 1970s to a consensus of gloom" (Bujra, 1982: II).

Late in the 70s, Adedeji (1978:25) began making gloomy predictions about Africa's economic prospects — predictions which have proved to be accurate. "Africa, more than the other third world regions, is thus faced with a development crisis of great portent..... If past trends were to persist.....the African region as a whole will be worse off relative to the rest of the world at the end of this century than it was in 1960". Three years later (1981), the World Bank *Development Report* was making similar predictions, that Africa was facing a "dim economic prospect" in the 1980s — virtually no growth in per capita income if you are an optimist, and a negative rate of growth (-1.0 per cent per year) if you are not. Under these circumstances OAU began taking the economic crisis seriously and generating an agenda on economic development.

Phase 2: OAU, 1980 –1990

The 1980s have been described as the "lost decade." Africa went through serious economic and political crises — negative growth, collapsing economies, civil wars, collapsing states and state structures etc. The international community became very concerned with the "unending crises," leading to what came to be called "Afro-pessimism". Implicit in this was the core idea that the African people — their societies, cultures, mindset and structures — are incapable of running their states and their economies and will therefore remain in a permanent state of crisis, stagnation and negative growth.

Afro-pessimism was born outside Africa and the idea was propagated both outside and inside Africa by those who had a vested interest in Africa remaining weak and disorganized for a long time. Most Africans, however, generally had a different view of these crises, their causes and continuation, and the way out of them.

Many Africans acknowledge that internal factors had contributed to the continuation of the crises, and such factors have been well articulated by Prime Minister Meles Zinawi of Ethiopia. He says:

"The underlying fact is that African states are systems of patronage... Their external relationship is designed to generate funds that oil this network of patronage...Much of the productive activity is mired in a system of irrational licenses and protection that is designed to augment the possibilities of rent collection. Much of the private sector in the continent is an active and central element of this network of patronage....

A large part of the NGO community and civil society organizations constitutes a parallel network of patronage that coincides and diverges from the state network depending on circumstances..... It is this structure which inhibits the establishment of developmental states in Africa that are able to adapt the rational elements of the neoliberal paradigm to their specific circumstances and design others to supplement it."[1]

On the other hand, most Africans identify and place more emphasis on external causes of their crises and the difficulty of overcoming them as follows:

- 1. Colonialism created the basic conditions of the crises — dependent economies, distorted structures, artificial boundaries/countries, divided people, undeveloped human resources and weak, undemocratic state structures.
- 2. The international commodity market and financial system and the dominant role of the Western transnational corporations were, and still are, extremely formidable barriers which weak African governments — individually or collectively — were and are unable to overcome.
- 3. Given these conditions, in which the international system continuously reinforced African countries' economic dependence to maintain their distorted structures and encourage the chaotic political systems inherited from the colonial states, African countries found it very difficult to economically develop, create nation states, and develop their human and natural resources.
- 4. The Bretton Woods institutions and donor countries intervened directly in African economies through structural adjustment programs, ostensibly to help Africans overcome their crises, but such interventions simply perpetuated the unequal and exploitative relationship between Africa and the global system.

According to the UN Economic Commission for Africa (ECA), African governments had three options for facing "the anticipated crises." First, increase "self-reliance and self-sustainment" and take more effective steps for intra-African cooperation and mutual help — steps

requiring "vision and statesmanship quite out of the ordinary". Second, make a "surreptitious surrender of the economy in return for substantial foreign aid, a temptation which might be impossible to resist". Third, "wait and see and hope whilst continuing with conventional measures which avoid creating antagonism" (ECA, 1979-1980:6).

The OAU, in collaboration with ECA, mobilized African intellectual and political discussions of the crises and the above options, and came up with a vision and plan of action for getting Africa out of the crises and towards a better future. This serious effort led to the adoption of three now famous documents, and from 1980 until 1990, all African initiatives from the OAU and ECA accepted the vision, framework, strategies and principles enshrined in these documents:

The Monrovia Declaration (1979) provided a clearly articulated vision and scenario for Africa's future. It saw that the Africa of 2000/2020 would have a high degree of self-sufficiency and a democratic national development, distribute wealth more equitably, have strong African solidarity, and carry more weight in world affairs (OAU, 1979:30).

The Lagos Plan of Action (1980) provided the practical framework and strategies for implementing development programs. Its strategies are based on some important principles, which it considered will lead to an alternative form of development and will take Africa out of its crises. These principles are:

- 1. Self reliance should be the basis of development — at national, sub-regional and regional levels
- 2. Equity in the distribution of wealth at the national level is a fundamental objective of development
- 3. The public sector is essential for development and should be expanded
- 4. Outside capital is an unavoidable necessity and should be directed to areas where African capital is lacking or inadequate — such as mining, energy and large-scale projects
- 5. Inter-African economic cooperation and integration is essential and should be effected as soon as possible
- 6. Change in the international economic order to favor Africa and third-world countries is essential, and Africa should continue to fight for a New International Economic Order.

On the basis of these principles, the LPA gave primacy to the development of agriculture, first for food and then for export; industrialization, to satisfy basic needs; mining industries, to recover total and permanent sovereignty over national resources; human resources; and science and technology.

The Final Act of Lagos (1980), containing political decisions to support the vision and the plan of action, including the aim of achieving an African Common Market by the year 2000. Ten years

later it was transformed into the ***Abuja Treaty (1991)*** establishing the African Economic Community. The Treaty affirmed the principles enshrined in the LPA and laid down a detailed process for achieving the Community in successive stages over 34 years.

In addition, during the 1980s, three other important African development programs were adopted: 1) Africa's Priority Programme for Economic Recovery, 1986-1990, adopted at Addis Ababa in1985; 2) the African Alternative Framework to Structural Adjustment Programme for Socio-Economic Transformation (AAF-SAP), adopted at Addis Ababa in 1989; and 3) The African Charter for Popular Participation in Development and Transformation, adopted at Arusha, 1990. The AAF-SAP was strongly opposed and often roundly condemned by experts of the World Bank and International Monetary Fund as well as in the donor community. Despite efforts to popularize AAF-SAP and strong support by African governments and intellectuals, the AAF-SAP was marginalized and eventually followed the fate of previous African initiatives.

The 1980s saw vigorous formal interventions by Western powers in the economic strategies and policies of African countries. These interventions took place through the World Bank and IMF, with donors using aid and debt as instruments of leverage. The keynote for these efforts was the World Bank's Berg Report (1981). It aimed to give an intellectual basis for World Bank intervention in the form of what became known as structural adjustment programs (SAPs), ostensibly in order to take African economies out of crises and lead them to accelerated development. There are several contradictions and shortcomings in the Berg Report compared to the Lagos Plan of Action (Bujra, 1982). The report does not address most of the crucial development issues which the LPA spelled out in detail. It gives scant and peripheral attention to industrialization and control and use of mineral resources, and never mentions economic cooperation and integration — all issues of central concern in the LPA. While the report advocates increased investment (foreign and local) and a reduction in the public sector, the LPA advocates *expansion* of the public sector.

Despite these shortcomings of the Berg Report, the World Bank/IMF began in earnest to implement their Structural Adjustment Programs (SAPs) in African countries immediately after the Berg Report. Both government officials and African researchers have informed the World Bank and IMF in no uncertain terms of the inappropriate assumptions behind the SAPs and of the negative impact of SAPs on African countries. In 1987 and 1988, the Economic Development Institute of the World Bank organized five senior policy seminars on structural adjustment in Africa, which drew participants from 27 countries. Participants were ministers, governors, permanent secretaries, senior advisors and a significant number of senior technical staff

of central banks and the core ministries of finance and planning, as well as spending ministries such as agriculture and industry. The strong and critical voice of the participants was expressed in very polite and diplomatic World Bank language in one of its reports (World Bank, 1989):

- 1. Most participants perceived adjustment programs as imposed from outside.
- 2. Adjustment must be seen in a broader context as involving medium and longer -term policies in addition to immediate (stabilization) measures.
- 3. Basic social services must be protected.
- 4. Current adjustment programs have yet to successfully reconcile demand management with supply-enhancing measures.
- 5. Promotion of sub-regional or regional trade and coordination of development plans — a main objective of the LPA — have not received the attention they deserve.
- 6. Significant social costs are associated with adjustment.
- 7. To be sustainable, an adjustment program must be nationally designed and /or designed to fit local conditions.
- 8. For many reasons — including the weak bargaining positions of African governments and their lack of indigenous capacity for policy formulation — international organizations currently set the agenda for policy reforms. This had a number of unfortunate consequences.
- 9. A long-term strategy based on export-led growth and the liberalization of foreign trade has few adherents.
- 10. The current African crises, to a considerable degree, have their origins in the international economic environment.
- 11. Negotiations can be better handled to reduce the tension between conditionality and national sovereignty.
- 12. Multilateral institutions should accept greater responsibility for failed programs.

Despite the above critique, SAPs have continued to be implemented, with slight technical modifications here and there. The serious and negative impacts of the SAPs are now well known. The most important formal response to the SAPs was the ECA's African Alternative Framework to Structural Adjustment Programme (AAF-SAP) in 1989. Among the many sharp and serious critiques of SAPs from African intellectuals is the book "*Our Continent, Our Future*", edited by Thandika Mkandawire (1999).

In 1989, a World Bank report, "Long-term Perspective Studies (LTPS)", proposed a global coalition of donors and Africans to effectively direct the intellectual framework and strategies of long-term development in Africa. The Global Coalition for Africa was thus established as an organization and is still operating

today. In the 1990s, the international community began to intensify its coordination at many levels — but without the participation of Africans. Its strategies and policies with regard to loans, debt, aid, trade, technical assistance, etc. became increasingly standardized. Its members individually all put forward the same conditionalities which they insisted African governments should accept — conditionalities which turned out to be those of SAPs (revised and elaborated), as well as the political conditionality of good governance. The latter conditionality was also adopted by the UN System as a whole, particularly by the UNDP.

In the 1990s, the international community intensified its coordination at many levels — but without the participation of Africans.

By the end of the 1980s and throughout the 1990s, perspectives and strategies coming from external sources had become the dominant, if not the only, director of development policies and programs in almost all African countries. Indeed, the practical power of the World Bank/IMF and the donor community (collectively often referred to as the international community) to intervene and direct detailed plans, programs and actual decision-making of African governments had become established and accepted in government circles.

At the more formal level of treaties, the EU continued with its Lome (now Cotonou) Conventions, renewed/renegotiated every several years, which guided the unequal trade relations between African and EU countries. More recently the Americans came with their own programme — the Africa Growth and Opportunity Act (AGOA). And the British and French (the two largest and most powerful former colonial powers) recently decided to synchronize and coordinate their African policies through annual/biannual joint meetings of their ambassadors in Africa.

In 2000, the World Bank, in association with its partners, came up with yet another document, titled *Can Africa Reclaim the 21st Century?* This book articulates long-term African development strategies from the perspective of the Bank and the rest of the donor community, aiming to provide intellectual inspiration to African policy-makers. The book also provided intellectual inspiration and development strategies for the latest African development initiative called the New Partnership for Africa's Development (NEPAD), according to CODESRIA (2002).

Phase 3: OAU, 1990 to 2002

Fundamentally different internal and external visions for African development have existed since the early years of independence. The present dominance of the

external vision simply reflects the realities of the weakness of Africa and the strength of the externals — the Western powers who drive the asymmetrical global system. Despite this Western dominance, OAU continued to enact important plans and programs in the 1980s and 1990s, but these had no effect on improving the economic situation of Africa.

The present dominance of the external vision for African development simply reflects the weakness of Africa and the strength of the Western powers which drive the asymmetrical global system.

Indeed, according to Dr. Salim A. Salim, the former OAU Secretary General (1989-2001), OAU had to change direction after the Lost Decade of the 1980s, and because of "the imperative necessity to cope with the fundamental changes taking place in the world and the end of the Cold War, as well as the emergence of the process of globalization with its various opportunities and threats" (Salim, 2001:6). By pursuing a new agenda, OAU is said to have made important contributions to Africa's development. There are six areas where OAU is said to have succeeded:

- 1. The Abuja Treaty (1990) is a road map for achieving the African Economic Community (AEC) through the Regional Economic Communities (RECs). Some progress has been made by RECs, but they still face serious problems internally and in their relations with the OAU, and now with the African Union.
- 2. The creation within OAU of the Mechanism for the Prevention, Management and Resolution of Conflicts (1990) was an important move, though it may not have the capacity to resolve, let alone prevent, conflicts in the continent. The most horrendous event of the 1990s in Africa was the Rwanda genocide of 1994, which OAU courageously tried but failed to deal with through the Arusha process of negotiations. After the genocide, OAU did not even discuss its own report on how to stop such events in future.
- 3. Inculcation of a culture of democracy, by withholding recognition of undemocratic changes of government and by monitoring elections. Both are important steps, but Western powers value the judgment of their own monitors more than OAU's (for example, in Zimbabwe). In the Madagascar case, the US and the European Union recognized a government which OAU considered illegitimate and

refused to recognize.

- 4. Enhancing the status of OAU continentally and internationally, compared to the 1970s and 1980s. But it is not clear what practical benefits this enhanced status can bring to African countries and people. As a result, can OAU marshal resources to resolve conflicts, or ask the World Bank to change its intervention in African countries?
- 5. Breaking the silence on HIV/AIDS and making governments develop programs to cope with this pandemic. In this important and very positive initiative, as with the situation of African refugees, most of the work is done by external agencies independent of the OAU.
- 6. Initiating the African Union process, from Sirte in 1999 to Durban in 2002.

These are important achievements made by an organization which had descended to the level of being called a "a talking club." Despite systemic constraints in the OAU, it can be said to have made a reasonable contribution to Africa's development.

At the closing of the 1990s and Dr. Salim's third term as Secretary General, three major African initiatives occupied the OAU, in addition to the process of establishing the AU: 1) The Conference on Security, Stability, Development and Cooperation in Africa (CSSDCA) was incorporated into the OAU as a special programme (2000); 2) the New Partnership for Africa's Development (NEPAD) was also taken up as a special programme of the OAU/AU in Lusaka, 2001; and 3) methods for OAU to cooperate and work with civil society organizations were developed by two major conferences in 2000 and 2001.

In a sense OAU left a full plate for the African Union — significant issues which, if positively and creatively handled, could propel the African Union into a powerful continental organization.

Why is Africa worse off now than when the OAU was founded? The simple answer is that the resolutions and programs adopted by the OAU were not implemented at the country level. But this begs the question: Why did heads of state sign up to radical development approaches at the OAU level, but fail to implement these approaches at the national level? Some brief explanations:

- 1. During the first 15 years of independence, former colonial powers had a strong presence and direct influence in African countries — technical personnel, aid, and strong political links between the former colonial governments and the African political leadership.
- 2. In the 1960s, African economies were doing well and generally had healthy foreign currency reserves. The emerging African business class was accumulating wealth by using state institutions and favored continuity of policies recom-

mended by colonial advisors and no radical change in the economic structure. When some governments (e.g. Tanzania) tried to change the existing economic structure through nationalization and diversifying external economic links, there was immediate strong media attack, diplomatic isolation, and economic pressure to stop such a "move to the left" — moves which disrupted the economy. This happened in Tanzania, Guinea-Conakry, Ghana (under Nkrumah), Congo-Kinshasa (under Lumumba), Benin, Somalia, Uganda (under Obote I) etc.

- 3. The second half of the 1970s saw economic crises intensifying all over the continent. There were serious rumblings among the populations and especially the military, which took power in many countries and led to worsening of the economic and political crises in those countries. The OAU therefore began to take up economic development as part of its mandate, and UNECA began to be more active. All this took place in the context of a strong debate in all African countries regarding alternative paths to development. OAU resolutions and programs on development absorbed ideas from this debate, which tended to reinforce the strong continental nationalism at the root of the OAU's very existence.
- 4. Political leaders found it easier to accept such alternative approaches to development because they saw on the ground in their countries the drawback of the approach inherited from the colonial powers.
- 5. Yet at country levels, most political leaders found it extremely difficult to debunk or reject existing economic policies. This is because (a) the cost of disruption would be too great; (b) the emerging indigenous economic elite within the political and administrative structure was very strong and favored continuity of existing policies, including shortages and other economic difficulties from which some groups among the elite gained economically; and (c) the power and influence of the "externals" for continuity was also very strong, because they could threaten to disrupt national economies and could ally themselves with the local groups which wanted continuity. Hence it was easier for heads of state to continue inherited economic policies and strategies at the country level, while at the same time approving radical and alternative economic strategies and policies at the OAU level. Schizophrenia between their countries and the OAU became a standard political behavior of political leaders.
- 6. Given this situation, the more

crises deepened in African countries and the more countries became indebted, the easier it was for the externals to ensure that traditional economic strategies and policies continued and expanded. Indeed, as African countries weakened, the externals had a unique opportunity to intervene strongly at the country level, essentially to direct country economic strategies and policies and often literally to manage and administer key economic institutions. This happened during the 1980s, and some would say continues to the present — at least in many smaller countries.

- 7. There is a fundamental difference between all previous African initiatives (especially since Monrovia, 1979) and the NEPAD of 2001-2002. They all had at their core the LPA principles, which are absent in NEPAD. From the perspective of the WB/IMF and donor community, these principles obviously make African initiatives radical, ideological and leftist. Following these principles would make African economies difficult to exploit and bring under the hegemony of the countries which are driving globalization. Since NEPAD has dropped these principles, it is not surprising that the G8 countries have welcomed NEPAD with open arms and given it moral support.
- 8. Finally, and needless to say, the African people, and indeed even the people of the so-called international community, are nowhere to be seen in this struggle for the development soul of the African continent.

Schizophrenia between their countries and the OAU became a standard political behavior of African political leaders.

It is argued that the AU will be different from OAU because African leaders are now more committed to exploit the global system through effective, concerted action — mainly through the AU's NEPAD Program. Also, because the AU will involve civil society in its decision-making and operations, it will be stronger and enable Africans to negotiate more effectively with external institutions such as the WTO, Cotonou, AGOA etc. However, to reduce the power of the "international community" at the country level and those driving globalization at the global level, it is necessary to have an effective and clean developmental slate, which might come about through NEPAD, and also to have a strong and capable AU that transcends OAU's weaknesses through the collective will of all member states.

THE AFRICAN UNION: PROSPECTS AND CONSTRAINTS

The creation of the African Union in Sirte (Libya) in 1999, the adoption of its Constitutive Act in Lome, July 2000, and its inauguration in Durban, July 2002, were important milestones in the process of creating political continental unity and the African Economic Community.

The creation of the African Union in 2002 was a major achievement of African leaders and a triumph for Pan-Africanism.

It was a major achievement of African leaders and a triumph for Pan-Africanism. The AU is expected to be a much stronger organization than the OAU. Among its new principles are the right of the Union to intervene in a member state, respect for democratic principles, human rights and good governance, and promotion of social justice and gender equality. Its development focus is similar to that of the LPA.

The AU has been described as an "aspirational union." Unlike the EU or ASEAN, it does not have solid common factors or forces on which to build. Both the EU and ASEAN were created during the cold war in the face of outside threats to their security. This is not the case with Africa. The EU members were highly industrialized and their industrialists wanted a larger and expanded market. Furthermore, the EU was driven by a few powerful core countries — France and Germany. The ASEAN was formed by like-minded strong states which felt threatened either by Communists or by secessionism. They therefore focused on security and stability in order to eliminate armed conflicts between member states and to promote economic policies based on capitalist economies. African countries are not being threatened from outside nor do they have industrial economies which need larger markets. Their economies are essentially all similar — exporting raw material. Unlike the ASEAN countries, they do not have a strong entrepreneurial class capable of strong open competition. While the EU and ASEAN started with a small number of countries, with the possibility of others joining them, the African Union started with all African countries as members. Thus, the most important driving force of the AU is the aspiration of people and their leaders for a common identity and unification.

The AU process has been very fast. It was consummated within three short years — from Sirte in 1999 to Durban in July 2002. The OAU had one year to prepare for the "transition" from the OAU to the AU, and the AU Commission has a one-year "interim" period to set up the core organs of the AU and to develop its program. The AU faces very serious, immediate challenges to obtain appropri-

ate human resources for a solid, efficient Commission with the professional and intellectual capacity to prepare, manage and implement relevant programs, and to secure the financial resources required to establish and operationalize its various organs. It is not clear how and where these resources can urgently be obtained, so that AU can start on a better footing than the OAU.

The longer term issues are even more complex and numerous and include the following:

- 1. Relationship between the AU and the RECs is key to any move in economic cooperation and eventual economic integration. The role of the RECs must be clarified, internal cohesion established, and the relationships among the RECs and between them and the AU must be thought through and properly established.
- 2. Relationship between NEPAD and CSSDCA must be ironed out, especially over the issue of peace, stability and conflict resolution. The vital issue of how these two important intergovernmental organizations will work within the AU, since each has established its own Secretariat and organizational structure.
- 3. Relationship between the different organs of the AU is not clear — especially between people's organs — Pan-African Parliament (PAP), Economic, Social and Cultural Council (ESCC), Court of Justice on the one hand, and the state-dominated organs — the Assembly, the Executive Council, and the Permanent Representative Committee.
- 4. Relationship at the decision-making and operational level between the Commission, Executive Council and Permanent Representative Committee will be crucial and needs full clarification lest the Union become ineffective and often paralyzed.
- 5. While all members of the Union have equal status and rights, it is obvious that they are not equal. The larger and more powerful countries would eventually want to establish some form of hegemony and play leading roles in various spheres. How will this work out in the Union?
- 6. The NEPAD program, once it begins to be operational, will inevitably create hierarchy amongst countries — fast and slow-track countries — based on

The most important driving force of the African Union is the aspiration of people and their leaders for a common identity and unification.

their performance in the Peer Review mechanism. What will be the implications of such hierarchy?

Much will depend on the speed, quality and operation of the organs established by the Interim Commission. Much will also depend on the reaction of the Union Assembly to the Commission's work and to the speed with which they establish functioning people's organs — the PAP, the ESCC, the Court of Justice — and how effective the people's role will be. At this point we are at the level of speculation and expectation.

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CURRENT TRENDS, PERSPECTIVES AND EVENTS

WINDOWS on the SOUTH

ACCESS TO ESSENTIAL DRUGS MAY BE UNDERMINED BY GLOBAL PATENT AGREEMENT

A third of the world's population still has no access to essential drugs. In the poorest countries of Africa and Asia this figure rises to half. With the global agreement on intellectual property rights (TRIPS) forcing countries to introduce new patent protection laws over the next decade, this situation could worsen, according to a new report from the London-based Panos Institute.

Developing countries have until 2005 or 2016 to implement TRIPS-compliant legislation on pharmaceuticals. So far many governments have drafted or enacted legislation that seems to prioritise patent rights over public health. Some countries are being pressurised into adopting policies that go further than TRIPS in protecting patents.

Patents give big international pharmaceutical firms monopoly over production of new drugs, including, for example, those needed to treat HIV/AIDS. There is concern that they may push up prices, and the TRIPS rules could thus limit poor countries' freedom to buy cheaper "generic" versions of patented drugs. For example, in January 2001, South African HIV/AIDS treatment activist Zackie Ahmat went to Thailand to buy 5,000 pills of the generic version of an anti-fungal drug patented by the US pharmaceutical giant Pfizer. He paid $0.21 a pill. The price of the patented version in South Africa was $13.

The Panos Report, Patents, Pills and Public Health: can TRIPS deliver? warns that patent legislation is not being

debated widely enough in most developing countries, and the process of introducing it needs to be more consultative and transparent.

In Uganda, for example, American consultants were brought in to review the country's patent laws and make proposals for reform. The result was the drafting of laws which, according to local campaigners, are skewed in favour of business interests rather than social or development needs.

The principle of extending access to essential drugs in poor countries is widely supported, but the means of doing this is still hotly disputed, says the report. According to the World Bank, middle-income countries may benefit from increased foreign investment, but if the cost of drugs rises as a result of patent systems spreading throughout the developing world, there is a real danger of restricting access to drugs, such as anti-AIDS drugs, where they are most needed. The World Health Organisation suggests that implementing patent protection where it does not already exist would result in the average price of drugs rising, with projected increases ranging from 12 to 200 percent.

The pharmaceutical industry argues that patent systems promote innovation and investment in research and development. Without patents, new ones would not be developed to tackle diseases such as tuberculosis and HIV/AIDS. They believe the real barriers to making drugs more available are poverty, weak political leadership, lack of trained health personnel and poor health infrastructures.

The report examines alternative approaches and gives examples where differential pricing (where poorer countries pay considerably less for a product than wealthier ones) and compulsory licensing (where a patent is overridden in return for a payment of a royalty) have potential, although they are not free of problems.

Two countries highlighted in the report, show how differently patent protection can impact on the nation's public health:

Brazil is seen as a model for other countries of what can be achieved for public health by boosting local production of drugs such as the anti-AIDS drug AZT, lowering prices through competition and negotiating discounts on patented drugs. Between 1996 and 2001 around 358,000 AIDS hospitalizations were prevented, saving around $1.1 billion.

On the other hand, Thailand's capacity to provide essential drugs for its people has been severely limited in the last decade due to relentless pressure from the US to tighten up its patent laws which, they complained, meant the loss of $30 million a year in sales for the American pharmaceutical industry, because it referred only to pharmaceutical processes and not products. The US went as far as imposing $165 millions' worth of sanctions on eight Thai products exported to the US. The US continued to exert pressure until the patent laws were changed and made even more restrictive than the international TRIPS agreement requires.

"This report should be a wake-up call to developing countries to look carefully at how they go about complying with TRIPS legislation and make sure that access to essential drugs is kept as an overriding right for the entire population — not just a wealthy few" says Martin Foreman, author of the Panos report.

The full Panos report and additional country studies can be downloaded from www.panos.org.uk. For further information contact Mark Covey, Media & Communications Officer on Tel +44 207 239 7622 or +44 208 960 1282 Email markc@panoslondon.org.uk.

AIDS AND DISCRIMINATION

In the Asia and Pacific region, when a person known to have HIV/AIDS checks into a hospital, the patient's registration sheet may carry the code "SIDA", French for AIDS. Bed sheets can be similarly marked, and the AIDS patient may be separated from other sick people. Hospital staff may not even want to touch the patient — a social outcast. These subtle and less subtle forms of discrimination in the health services against people living with HIV/AIDS are rooted more in fear than in ignorance. At the end of 2001, according to UNAIDS, 7.1 million people in Asia and the Pacific were living with HIV, the virus that makes the human body's immune system defenseless against killer diseases.

"Hospital personnel know enough about AIDS. But out of lack of care and fear, doctors are afraid to treat AIDS patients. Moreover, intimidating media reports about AIDS feed into that fear," says Daniel Marguari, program manager of the Spiritia Foundation, a Jakarta-based nongovernmental organization that advocates for the needs and rights of people living with HIV/AIDS.

There is also discrimination in the work place, where a person publicly identified with AIDS can be fired. When persons known to be living with HIV/AIDS want to buy food from a street vendor, the vendor often insists that these customers use their own plates, says Christin Wahyuni, a Spiritia program officer. The right to confidentiality is often denied to people with HIV/AIDS, including by the media.

Spiritia meets with health authorities, private companies, local officials, the media and people with HIV/AIDS to stress that they have the same rights as other people. The NGO also published a booklet, "Empowering Patients," about their rights in hospitals and consultations with doctors.

At the regional level, the Singapore-based Asia Pacific Network of People Living with HIV/AIDS works in six ASEAN countries. It plans to publish the results of its survey on discrimination. An ASEAN formal session in November 2001 was addressed by a person living with AIDS in southeast Asia to emphasize empowerment of people with HIV/AIDS by their

participation in decision-making processes that affect them. At a global level, the denial of equal treatment to people with AIDS and the discrimination and stigma they face is such a festering issue that it was a theme in the fourteenth annual International Conference on AIDS, held in Barcelona in July 2002.

By Warief Djajanto,
ASEAN Features, Jakarta

ASEAN FARMERS GOING ON THE INTERNET

Many of the 200 million farmers and agriculture workers in the 10-nation Association of Southeast Asian Nations (ASEAN) will soon have the opportunity of going Internet — a tool that promises to make farmers earn more and buyers pay less.

In November 2000, the 10 ASEAN member states signed off on a blueprint for development of e-ASEAN. This information structure will facilitate e-commerce, e-society and e-government; promote liberalization of investment and trade in information and communications technologies (ICT); and build technological capacity through human resources development. The hope is to "bridge the digital divide among its member countries and within each of them," says ASEAN Secretary-General Rodolfo C. Severino Jr.

A challenge facing most ASEAN member states is how to provide ICT services to rural and agricultural communities. To help close that gap, in February 2002, an e-Farmers project was launched to make available an Internet-based trading e-hub that will link the trading needs of small farmers and large companies in many countries. The project is an ASEAN partnership with a private group incorporated in Singapore — the Agritani e-Hub Pte Ltd.

Jailani Mustafa, business architect of Agritani and principal adviser to the ASEAN e-Farmers task force, cited as an example a fruit farmer in Bandung, Indonesia, who may earn 700 rupiah (US$0.07) for each pineapple he grows. Malaysian farmers, with good market access through the Internet, can earn 2 1/2 times more than Indonesian farmers. That same Indonesian pineapple can fetch 30,000 rupiah (US$3.00) in Amman, Jordan, a more than 40-fold increase. Imagine that example multiplied in the US$150-200 billion worth of annual trade in agricultural products in ASEAN countries, and one can see the potential impact of the e-Farmers project.

Asian farmers get a low profit margin because of fragmentation and poor information. Small land holdings prevent the use of advanced technology for better output and better utilization of services; it is not efficient to run half-empty trucks of agricultural produce from farm to market. Just as important, farmers do not get real-time information on where they can get the best price, so demand and supply are

mismatched. "Middlemen take advantage. When you sell in small volumes, you can't demand a good price," says Mustafa. Farmers can overcome that disadvantage by getting good information on the e-hub.

To access the e-hub, farmers can join a cooperative and do not need to be computer-literate. Trained personnel of a cooperative or a local farmers' bank can help member-farmers get access, link them to buyers and arrange all the details from insurance and shipping to financial settlement. In the province of Jambi in Indonesia, several sites involving hundreds of farmers' cooperatives have been identified as part of the e-hub with the support of a joint government/non-government task force. Thai farmers have also begun to use the e-hub. Cambodia and Malaysia were slated to join in late 2002.

From ASEAN Features, Jakarta

FOREIGN INVESTMENT DOWN IN LATIN AMERICA AND THE CARIBBEAN

After a decade of unprecedented growth, the flows of foreign direct investment (FDI) into Latin America and the Caribbean fell from US$105 billion in 1999 to US$80 billion in 2001. Preliminary data for 2002 show no sign of a turnaround. However, as a region, the 10 per cent decline in 2001 compares favorably to a 50 per cent reduction in global flows.

A structural factor in the region has been the completion of economic reforms, which attracted much of the wave of FDI during the 1990s. Actions like the privatization of large state-owned firms in energy and basic services triggered FDI of US$18 billion in 2000, but only US$1.35 billion in 2001. Also, transnational companies' purchases of large national companies had generated an annual average FDI of US$43 billion in 1999-2000, but only US$25 billion in 2001, which saw mainly consolidation in the newly enlarged organizations.

The percentages of regional FDI flows in different countries during 2001 were Mexico, 35 per cent (up from an average 18 percent for 1995-2000); Brazil, 32 per cent (down from 35 per cent); Central American and the Caribbean, 6 per cent (unchanged); Chile, 6 per cent (down from 8 per cent); and Argentina, 4 per cent (down from 17 per cent).

The report reviews elements that could encourage capital inflows and strengthen regional development as well; calls for making FDI policies more active, more explicit and stronger in their "development dimension" and their linkage to national strategies; traces the growing role of transnational firms in the region's economy; and notes such disadvantages as the enclave-like style of most transnational firms and their weak impact on competitiveness. A special chapter within the report focuses on Argentina.

These data and findings are in a recent

report on foreign investment in Latin America and the Caribbean, which is available in Spanish (go to) and forthcoming in English.

From ECLAC

UNCTAD CALLS FOR NEW POLICIES FOR AFRICAN DEVELOPMENT

How are multilateral financial institutions tackling the problems of poverty in Africa? This is the question asked in a new study by UNCTAD titled *From Adjustment to Poverty Reduction: What is New?*

After almost two decades of structural adjustment programmes, poverty in Africa has risen, slow and erratic growth are the norm, rural crises have intensified, and de-industrialization has damaged future growth prospects. The study looks at the effects on economic growth and income distribution of the packages on offer from the multilateral financial institutions. It concludes that these packages need a careful, frank and independent assessment if they are to deliver on their promises. The study also cautions that any fresh policy initiatives must be matched with adequate external resources, debt reduction and better market access if they are to succeed.

The study examined 27 Poverty Reduction Strategy Papers (PRSPs) prepared on African countries, and describes four policy approaches which seem to characterize them:

- There continues to be a need for structural reforms designed to accelerate the integration of the region into the global economy through liberalization, deregulation and privatization, as the key to sustained and rapid growth.
- But stabilization and adjustment policies may have a temporary adverse impact on the poor, thus requiring safety nets and targeted spending programmes to mitigate that impact.
- Because growth may not automatically trickle down to the poor, greater emphasis should be given to the public provision of primary education and health care.
- There is a need to achieve policy "ownership" based on wide-ranging consultations with civil society and the poor, but ownership should go beyond the design of safety nets and extend to macroeconomic policies and development strategies.

According to the study, inflation is not the principal economic challenge in most African countries. Instead, macroeconomic policies should be designed with growth and the goal of raising productive investment in the forefront. The study also warns against "quick poverty fixes" that redirect public spending to social sectors at the expense of other types of public investment, and notes that social impact analysis has not yet been included as an integral part of PRSPs.

Rapid trade and financial liberalization is still expected to increase the access of the poor to financial and other assets that could allow them to escape from poverty. But any explanation of how this happens is missing from the PRSPs. The study argues instead for proper sequencing of reforms in line with institutional capacities, effective regulation and management of capital movements, and limited, time-bound protection for certain industries to allow active nurturing of the industrial sector.

The study welcomes the attention given to raising standards of education and health care. However, the recommendation to combine fully funded primary education and basic health care with across-the-board user fees for higher levels of education and health care suggests a misplaced faith in markets as the fairest way to deliver on these goals. The study shows that increased public expenditure across all levels remains the surest way of reducing income inequality, although differentiated subsidies and user fees and a progressive tax system would ensure that the rich pay more for the provision of such services.

The new approach puts considerable emphasis on improving governance as a prerequisite to sustained growth. But the UNCTAD study says there should be no illusions about the pace at which institutions can improve, nor any doubt that imposing a common institutional standard on countries with varying conditions is likely to be counterproductive. And the idea that fighting corruption by diminishing government resources and responsibilities will bring the desired improvements is off-target, the study contends. It calls for a focus on quality government, not smaller government.

The study recommends considerable pruning of the political conditionalities that have increasingly been attached to aid and debt reduction in recent years. An average of 114 conditions are attached to multilateral lending to countries in sub-Saharan Africa, of which almost three quarters relate to governance. It is difficult to reconcile countries' "ownership" of their policies of economics and governance with these conditions, which go well beyond the original rationale of protecting the financial integrity of the multilateral financial institutions.

Access to developed countries' markets remains essential if African economies are to grow out of poverty. Despite some recent initiatives, trade barriers are still excessive. The financing gap facing African economies is just as daunting. The recent pronouncements at the International Conference on Financing for Development and at the G-8 Summit promise a reversal of the decline in resources, but fall well short of the additional $10 billion needed in annual aid to kick-start African growth. And the debt overhang persists despite the long-standing efforts of the international community to design acceptable programmes and timetables. The study calls

for a fresh and bolder approach on all fronts, with growth rather than charity as the motivation for recasting international rules of engagement in the fight against poverty.

ANCIENT SOUTH-SOUTH TRADE BETWEEN EGYPT, INDIA AND JAVA

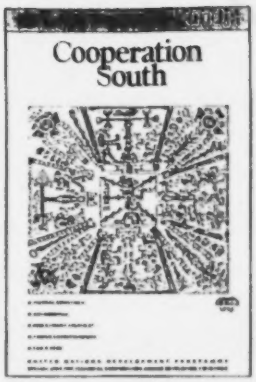
Building ruins. Teak, coconuts and batik cloth from India. Metal and sail cloth from ships. Imported sapphire and beads. Stores of peppercorns from the East. Inscriptions and other written materials in 11 different languages. A discarded customs archive written on potsherds.

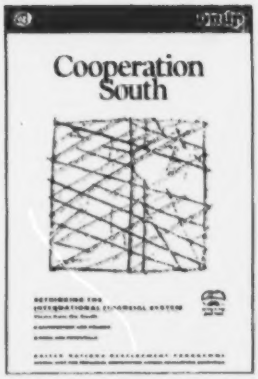
These are among the artifacts uncovered at the site of the ancient intercontinental port of Berenike on the Red Sea coast of Egypt, as recently reported by archaeologists after eight years of excavations. These findings confirm historical accounts of a robust seaborne trade across the Indian Ocean which reached to India and as far east as Thailand and Java. The remains are described as the most extensive so far found of the ancient world's east-west maritime commerce.

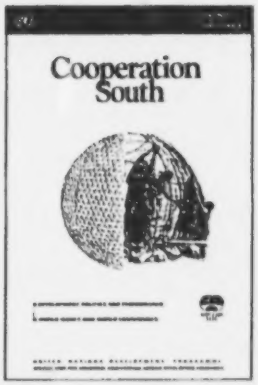
Berenike lasted as a maritime center, including periods when it thrived and declined, from the third century B.C. until about 400 A.D. From Berenike, ships went southward to Ethiopia, Somalia and Kenya for ivory, tortoise shell, drugs and slaves. Other ships sailed east to take on frankincense and myrrh at south Arabian ports at Muscat and Sur. Bigger ships as long as 180 feet carried up to 1,000 tons of cargo on monsoon winds along the 3,500-mile round trip to and from India, and even beyond. Finding large quantities of teak, a hardwood native to India, in Berenike, archaeologists assume that it came from ships built of teak in India, probably carrying Indian crews, and eventually damaged and dismantled at Berenike.

The Indian Ocean route rivaled the better known Silk Road which ran over land from China through Samarkand and Baghdad to Tyre and Antioch on the Mediterranean's eastern coast. Involving less cost and hardship than the Silk Road, the sea route was sometimes its only reliable alternative when rivals blocked its path. Located about 600 miles south of Suez near the Egypt-Sudan border, Berenike was the greatest, but only one, of the Red Sea ports that hosted the cargoes, crews and merchants of ocean commerce. Two other likely ports are being studied by archaeologists at Myos Hormos and Nechesia.

One of the archaeologists studying the area, Dr. Willeke Wendrich of the University of California at Los Angeles, described the long-lasting South-South trade route as highly productive. He said, "We talk today about globalism as if it were the latest thing. But trade was going on in antiquity at a scale and scope that is truly impressive."







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A 21ST CENTURY VISION

Excerpt from Nobel Lecture *by Kofi Annan, United Nations Secretary-General*

We have entered the third millennium through a gate of fire. If today, after the horror of 11 September, we see better, and we see further — we will realize that humanity is indivisible. New threats make no distinction between races, nations or regions. A new insecurity has entered every mind, regardless of wealth or status. A deeper awareness of the bonds that bind us all — in pain as in prosperity — has gripped young and old.

In the early beginnings of the twenty-first century — a century already violently disabused of any hopes that progress towards global peace and prosperity is inevitable — this new reality can no longer be ignored. It must be confronted.

The twentieth century was perhaps the deadliest in human history, devastated by innumerable conflicts, untold suffering, and unimaginable crimes. Time after time, a group or a nation inflicted extreme violence on another, often driven by irrational hatred and suspicion, or unbounded arrogance and thirst for power and resources. In response to these cataclysms, the leaders of the world came together at mid-century to unite the nations as never before.

A forum was created — the United Nations — where all nations could join forces to affirm the dignity and worth of every person, and to secure peace and development for all peoples. Here States could

unite to strengthen the rule of law, recognize and address the needs of the poor, restrain man's brutality and greed, conserve the resources and beauty of nature, sustain the equal rights of men and women, and provide for the safety of future generations.

We thus inherit from the twentieth century the political, as well as the scientific and technological power, which — if only we have the will to use them — give us the chance to vanquish poverty, ignorance and disease.

In the twenty-first century, I believe the mission of the United Nations will be defined by a new, more profound, awareness of the sanctity and dignity of every human life, regardless of race or religion. This will require us to look beyond the framework of States, and beneath the surface of nations or communities. We must focus, as never before, on improving the conditions of the individual men and women who give the State or nation its richness and character.

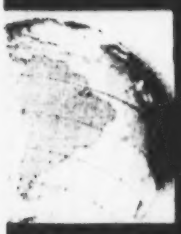
Over the past five years, I have often recalled that the United Nations' Charter begins with the words: "We the peoples." What is not always recognized is that "We the peoples" are made up of individuals whose claims to the most fundamental rights have too often been sacrificed in the supposed interests of the State or the nation.

A genocide begins with the killing of one man — not for what he has done, but because of who he is. A campaign of 'ethnic cleansing' begins with one neighbour turning on another. Poverty begins when even one child is denied his or her fundamental right to education. What begins with the failure to uphold the dignity of one life, all too often ends with a calamity for entire nations.

In this new century, we must start from the understanding that peace belongs not only to States or peoples, but to each and every member of those communities. The sovereignty of States must no longer be used as a shield for gross violations of human rights. Peace must be made real and tangible in the daily existence of every individual in need. Peace must be sought, above all, because it is the condition for every member of the human family to live a life of dignity and security.

The rights of the individual are of no less importance to immigrants and minorities in Europe and the Americas than to women in Afghanistan or children in Africa. They are as fundamental to the poor as to the rich; they are as necessary to the security of the developed world as to that of the developing world.

From this vision of the role of the United Nations in the next century flow three key priorities for the future: eradicating poverty, preventing conflict, and promoting democracy. Only in a world that is rid of poverty can all men and women make the most of their abilities. Only where individual rights are respected can differences be channelled politically and resolved peacefully. Only in a democratic environment, based on respect for diversity and dialogue, can individual self-expression and self-government be secured, and freedom of association be upheld.



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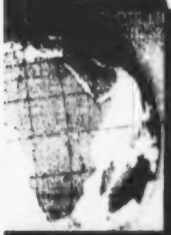

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PROTECTING CREATIVITY AND SPREADING ITS BENEFITS:
The Two Sides of Intellectual Property Rights (IPR)

"ROAD MAP" FOR INTELLECTUAL PROPERTY RIGHTS. What are they, why are they important, what international trade rules deal with them, and what future IPR strategies would help developing countries?

BALANCING HEALTH NEEDS AND DRUG RESEARCH INCENTIVES. Duncan Matthews

PRICING MEDICINES TO BENEFIT POOR COUNTRIES. Should [illegible] diseases such as malaria [illegible] poor countries and for diseases such as AIDS which afflict rich and poor countries alike? Jagdish Bhagwati responds.

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